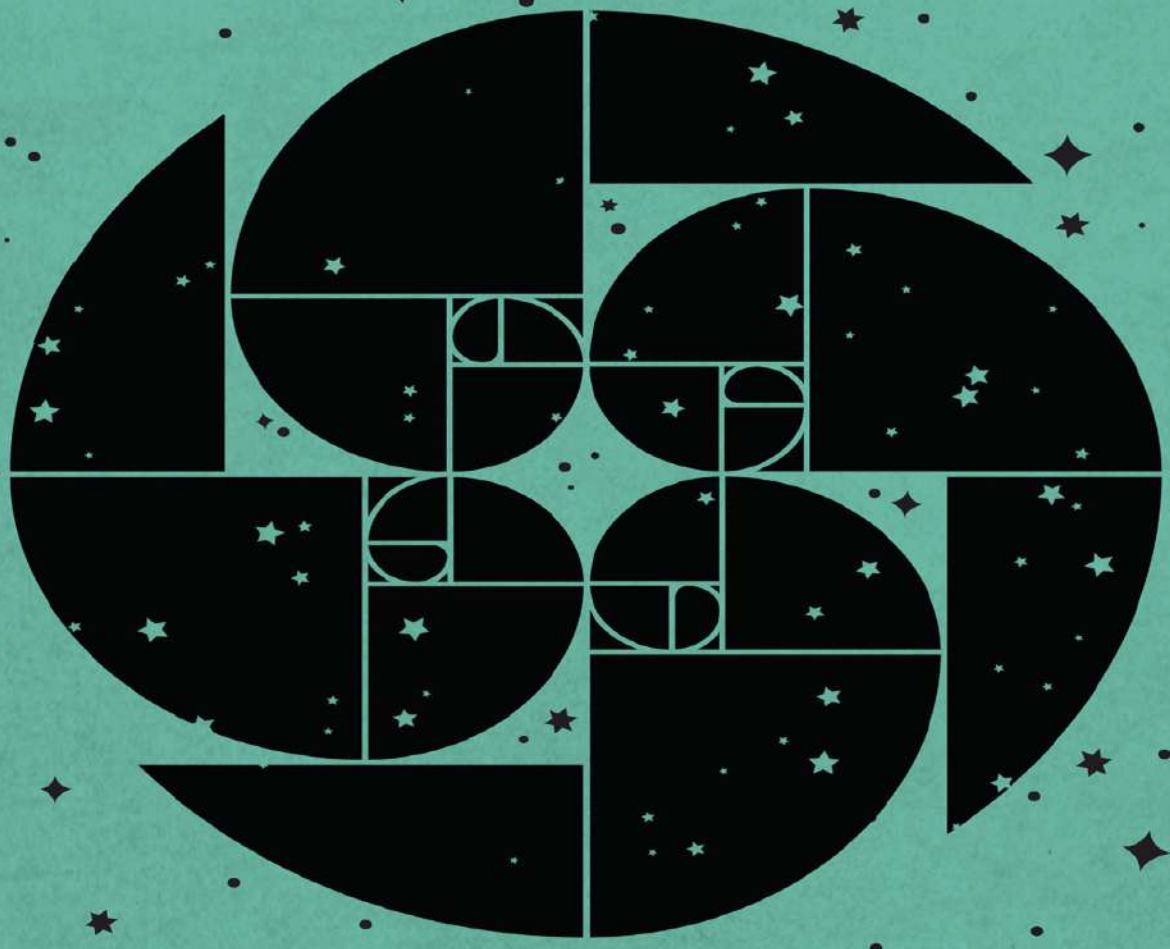
IN FOCUS

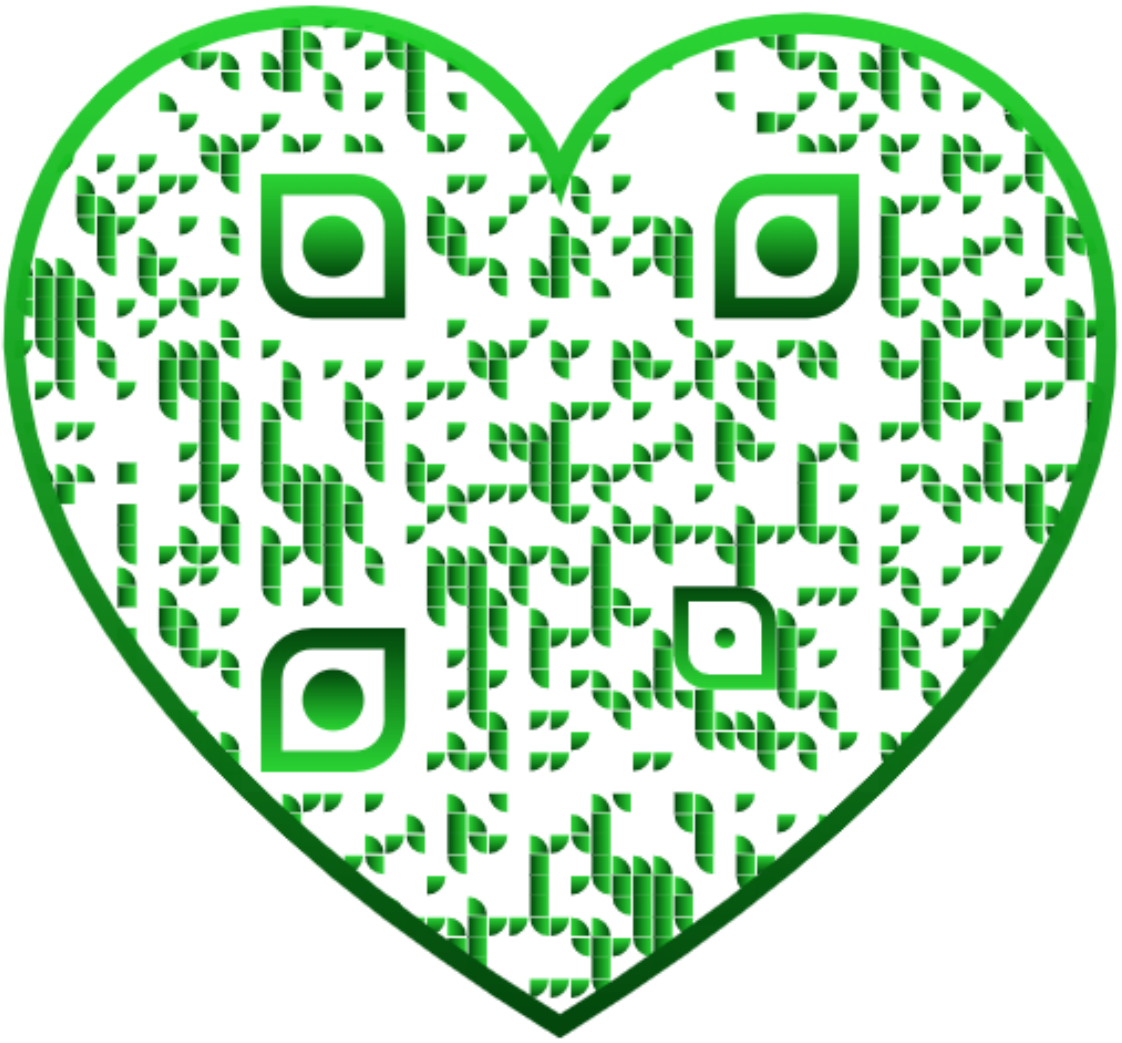
SACRED GEOMETRY

Your Personal Guide



Includes an 18 x 24–inch wall chart

Bernice Cockram



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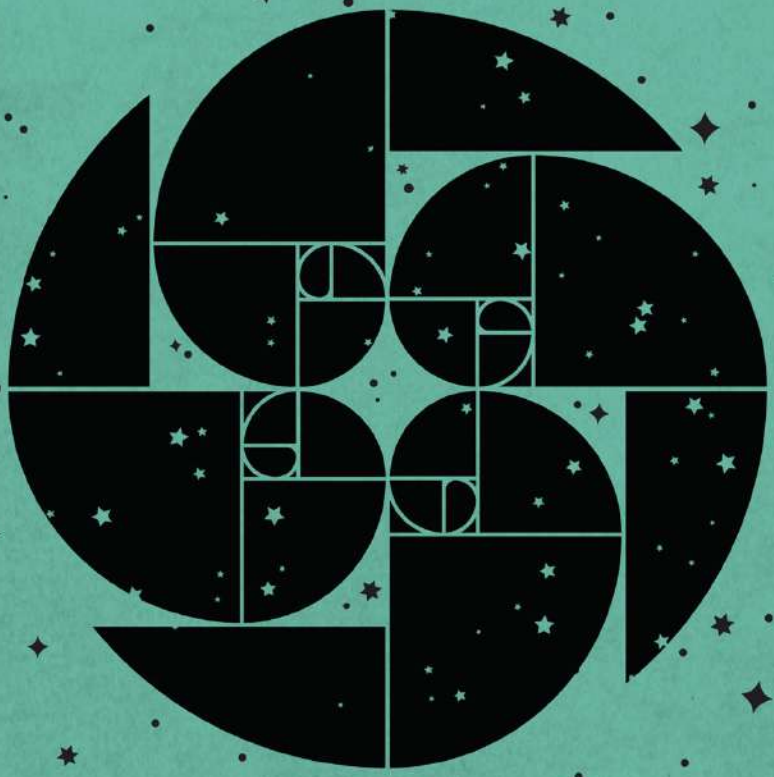

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INTRODUCTION

What is sacred geometry? Geometry at its basic level is the design of shapes based on mathematics; *geometry* literally means "earth measure," as *geo* refers to the earth and *metry* to measurements. Geometric shapes are so much a part of our everyday life that we may not even notice just how frequently they can be found. Hopefully, after reading this book, you will start to see many examples that you never noticed before.

Mathematicians have studied geometry for thousands of years. The early mathematicians marveled at the perfection of their calculations, and they attributed this perfection to the Creator—this is how geometry came to be sacred.

Geometry began to be used in a symbolic way, especially in religion, due to the fact that the general population were not able to read and write, but they were able to recognize shapes. Some shapes were also used symbolically in secret societies, where only the members of the society would understand their meaning.

The History of Sacred Geometry

People have searched for the meaning behind mathematical patterns for thousands of years. The Egyptian Rhind Papyrus from ca. 2000–1800 BCE is one of the earliest known writings on geometry, along with the Moscow Papyrus from ca. 1890 BCE and the Babylonian clay tablets of ca. 2000–1800 BCE.

Some of the most notable published discoveries are works from:

- **Thales of Miletus** (ca. 624–ca. 546 BCE), a Greek mathematician, discovered that geometry could be used to calculate the height of pyramids and also a ship's distance from the shore.
- **Pythagoras** (ca. 570–ca. 495 BCE), a Greek philosopher, set up a school to study geometry in ca. 530 BCE. His students were referred to as Pythagoreans.
- **Plato** (ca. 427–347 BCE), a Greek philosopher, was the founder of the Academy in Athens and discovered the Platonic solids.
- **Euclid** (ca. 330–275 BCE), a Greek mathematician, had his findings published in a 1570 book called *Elements* that was a collection of geometric studies from several mathematicians.
- A**rchimedes** (ca. 287–212 BCE), a Greek mathematician, created the Archimedean solids and the Archimedean spiral.
- **Leonardo Pisano** (ca. 1170–after 1240), better known as Fibonacci, was an Italian mathematician who wrote *Liber Abaci (Book of the Abacus)* in which he introduced the number series today referred to as the Fibonacci sequence.
- **Luca Pacioli** (ca. 1447–1517) was an Italian mathematician who wrote *Divina Proportione (Divine Proportion)*, a book about mathematical proportions in architecture, polygons, art, and which was illustrated by Leonardo da Vinci.
- **Johannes Kepler** (1571–1630 BCE) was a German mathematician and astronomer. Although most commonly known for his observations on the paths of the planets, he also made some important discoveries with geometry.

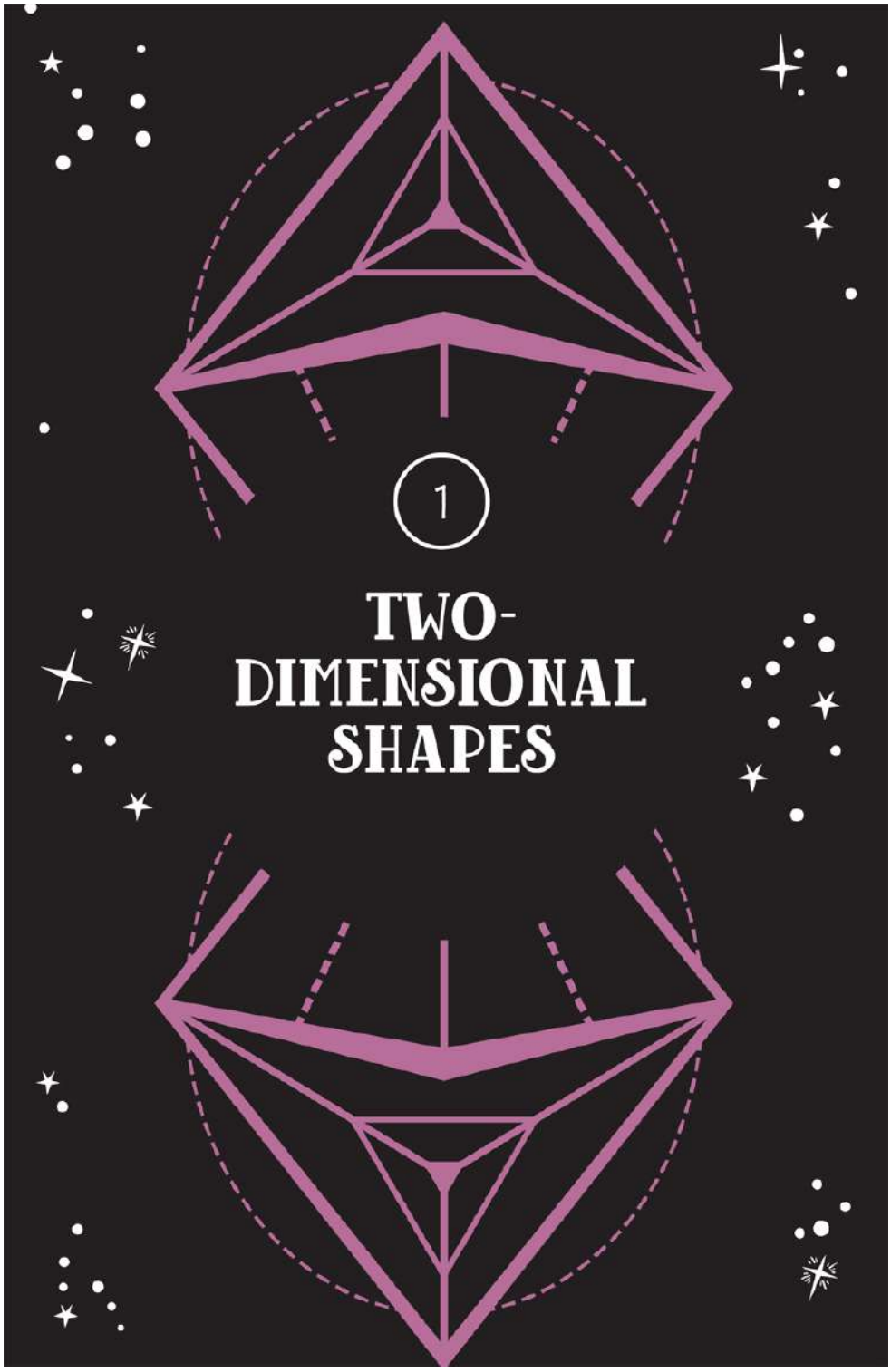
There have been many other mathematicians that have advanced our appreciation for and understanding of the patterns and symbolism of sacred geometry, but those above are referred to later in the book.

Another very important name is Drunvalo Melchizedek. He introduced sacred geometry to the world in a series of workshops from 1985 to 1994. If you would like to find out more about sacred geometry, I would highly recommend reading some of his work.

Throughout this book you will discover many different shapes and their meanings as you learn about the shapes themselves as well as how sacred geometry appears in letters, numbers, art, architecture, and religious symbols. You will even find out about the math behind it all. After all, sacred geometry appeals to us on many levels, as the shapes formed are often symmetrical and balanced; we are always subconsciously seeking balance in mind, body, and spirit, and so people use these shapes just about everywhere in the world.

Sacred geometry can be incorporated into your own everyday life and spiritual practices in a number of ways: through artwork, room and garden design, meditations, and visualizations, to name just a few. As you learn more about the shapes and the many places they can be found, you will find suggestions for different ways of working with sacred geometry.

Enclosed Sacred Geometry Wall Chart Included in this book is a wall chart that serves as a quick and handy reference guide containing a summary of the essentials of sacred geometry from the following pages.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TWO-
DIMENSIONAL
SHAPES

Shapes with two dimensions have height and length/width, and are essentially flat. If the shape has straight sides, it is called a *polygon*. This word is Greek in origin, *poly* meaning "many" and *gon* being short for *gonia*, which means "angle." The polygons described in this chapter are all regular, meaning they all have the same interior angles. In an irregular shape, some of the angles will be different. Although this chapter is about two-dimensional shapes, we cannot begin without first talking about the line.

The Line

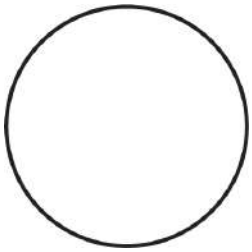
Lines are one-dimensional, which means they have length but no width or height. A line can be a boundary or a partition. Lines can be connections, so a line can travel from point *a* to point b. Lines can be used to emphasize, as in an underline, or they can express dissatisfaction by striking through words. We have linear graphs and starting lines, we are used to "standing in line," and there are many sayings that revolve around the word *line*, such as:

- Hold the line
- Lifeline
- Toe the line
- A fine line
- Between the lines

Over the years, many symbolic meanings have been attributed to lines, from ancient cave art to sacred religious symbols. Generally speaking, straight lines are considered masculine, and curves, arcs, and circles are considered feminine. When it comes to geometry, however, numbers play a large part, because even numbers are considered feminine, while odd numbers are masculine, except for the number *one*. One was historically held in great esteem, and it was seen as the basis of everything, much like the line. The line is the starting point of this book, just as it is the starting point of all geometry.

The Circle

Just as life starts with a single cell, the first shape of sacred geometry is the circle. Circles have been regarded as important since ancient times. The sun and the moon were worshipped as a god and a goddess, while the discovery of the wheel had a huge impact on how our ancestors lived. The circle was referred to as *monad*, meaning "one," by the Pythagoreans, and it represented the origin of all things. This is the shape that was attributed to the Creator, embodying perfection and wholeness. With this connection to the divine, the circle came to represent the same characteristics of the Creator, which are wisdom, unity, and perfection. It can also depict nothingness because a circle can be equated to zero and the absence of something. In astrology, a circle with a dot in the center represents the sun, and like the sun, this symbol is considered masculine. In Norse mythology and some religions, the sun is represented by a circle with a cross inside.



The circle also epitomizes eternity, as there is no beginning and no end, giving rise to the tradition of exchanging rings during a wedding ceremony. For this reason, it is also a common shape in many icons and logos that are linked with gods and goddesses. In Jewish funerals, it is common for bagels to be served, because their circular shape represents the cycle of birth, death, regeneration of the soil, and, possibly to some people, also reincarnation.

The serpent known as ouroboros is drawn in a circular shape, biting its tail, and this image represents eternity and wholeness. Snakes and serpents are connected with knowledge and wisdom, but also with rebirth, due to the fact that snakes shed their skin.

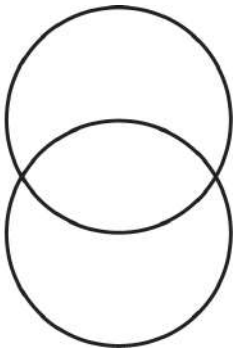
Tip

While the sun is considered masculine in most mythologies, in the German language, the sun is feminine (*die Sonne*) and the moon masculine (*der Mond*), so things aren't necessarily as fixed as we think they are.

A circle is often drawn encompassing another shape or pattern to indicate protection from outside influence. This could hark back to ancient times when a boundary wall would be built around a settlement to afford protection from invaders, therefore separating the inside from the outside. A circle in three-dimensional form is known as a sphere, globe, or orb.

Vesica Pisces

Vesica pisces is formed by two overlapping circles. *Vesica pisces* is Latin for "bladder of a fish," describing the likeness of this image to the swim bladder. With vesica pisces we have the beginning of duality. Growth occurs with one single cell splitting into two, giving the illusion of separation, yet it is still part of the one. This shape can also demonstrate the nature of opposites, so while we have hot and cold, in the middle there is warm. If black and white are merged, the result is gray. Vesica pisces illustrates that even in polarity there is a connecting factor. This can also be seen in comparisons such as "this one or that one" or "one or the other."



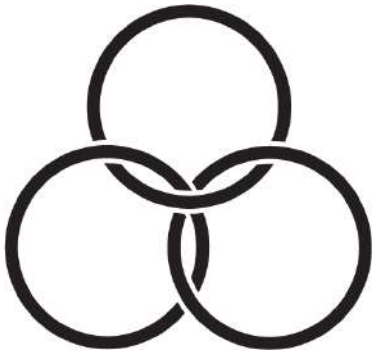
Twos are representative of both separation and connection. On one hand there are partnerships and duets, but on the other, there are enemies and differing points of view. The number two can also suggest balance, like two people on a seesaw or two pillars in a doorway. Ancient cultures worshipped both the sun and the moon, seeing them as the dual deities of god and goddess. However, Plato suggested that the number two had no meaning, as it suggested a relationship, and relationships always bring in a third element. Vesica pisces may also represent something that is a mirror image, or even a clone of the original. In the center of vesica pisces where the circles overlap is the *mandorla*, which is an Italian word for "almond," which is taken from its shape.

The mandorla is often used in religious art, surrounding holy characters such as saints. If heaven is one of the circles of vesica pisces, and the earth is the other, the mandorla represents the union of both. In contrast, it can also represent a doorway to a different dimension. The mandorla also symbolizes female genitalia and the cosmic womb, and in Christianity it is referred to as the "womb of Mary." The mandorla can be found on the

sheela-na-gig, which is a figure that is often found carved into church walls; it is said to be a metaphor for either fertility or chastity. The rhombus (sometimes called a lozenge), a similar shape to the mandorla, also represents the vulva and, as such, the creation of life. The mandorla also typifies creation, the result of the union of male and female, and thus a separate entity but a combination of both. The mandorla may also be found with a circle in the center, creating an eye-like appearance, and this symbolizes the all-seeing eye of the Creator.

Tripod of Life

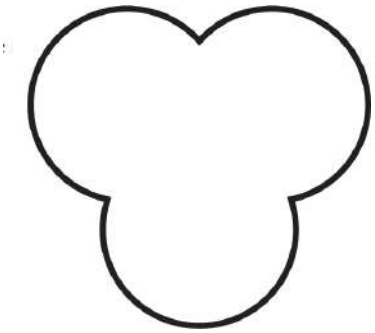
From vesica pisces, a third circle is drawn underneath to intersect with both existing circles, and this shape is known as the tripod of life. This type of circle arrangement is also known as Borromean rings. When taking a closer look at Borromean rings, we can see that the arrangement needs all three rings to remain interlocked. If one of the rings were removed, the other two would not be connected. The Borromean rings are a metaphor for group energy, depicting situations that require cooperation, similar to the Olympic rings that symbolize the union of five continents.



The tripod of life is often used to form a Venn diagram, which uses the intersecting areas to illustrate the relationship between three ideas/subjects, such as the three primary colors. The number three is attributed to the mind, body and spirit, and the tripod of life illustrates how each of these aspects affects, or is affected by, the others.

Trefoil

The trefoil can be formed by drawing around the outline of the tripod of life. This shape gets its name from the Latin *trifolium* meaning “three-leaved plant.” It was often used in window architecture, especially in churches, where it represented the Holy Trinity. Sometimes the trefoil outline includes the shape of a triangle, which is called a “barbed trefoil.” As circles are considered feminine and straight lines masculine, this shape could be considered a balance of both energies.



Triskelion

By turning the three circles into spirals that meet at a central point, a triskelion is created. The triskelion represents cycles, movement, and progression. In Celtic symbolism, it is used to represent spiritual development.

The spirals represent mind, body, and spirit and show how these aspects are all interconnected: any positive change that is made to one part affects the whole.

A Triskelion Meditation

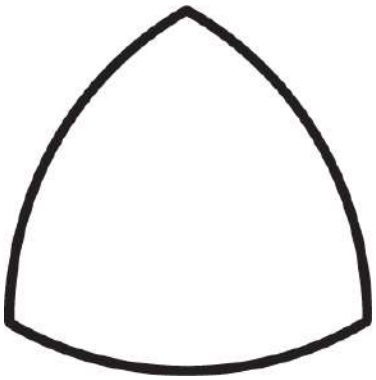
- Sit quietly with your eyes closed and visualize yourself standing at the center of a triskelion.
- Choose one of the spirals to walk along (either mind, body, or spirit—it doesn't matter which spiral you attribute to each), and think about the positive changes you may like to make for each one. For example: walking along the mind spiral path, you may want to start talking to yourself in a more positive way, learn a new skill, or try to be more patient. If you walk along the body spiral path, you may want to, for example, start exercising, begin a yoga class, or eat more healthily. For the spirit path, you may want to start meditating more frequently, make more time for yourself to relax, or release an issue from the past.
- As you walk along your chosen spiral, hold this question in your mind: What do I want to change with my … (body/mind/spirit)? You may get many answers, or just one. (If you do not receive an answer to your question, try returning to the center of the triskelion and choosing a different path to walk along.)
- When you reach the center of your chosen spiral, visualize yourself turning around and walking back outward along the spiral, looking at each change you would like to make. This time, however, decide whether it is a commitment you are able to implement at this time and what action you are going to take for that commitment. It often helps to form your intention with an affirmation. For example: if you were walking along the body spiral and thought you want to eat more healthily, as you come back along the spiral, affirm to yourself "I eat healthily" and think of some ideas how this may be achieved, such as starting with one more piece of fruit a day or choosing a healthy alternative to a sugary drink. If you want to meditate more often, affirm to yourself something along the lines of "I meditate regularly" and then write on your calendar or diary a definite appointment when you intend to meditate. If your intention is to be kind to yourself, you might like to choose an affirmation along the lines of "I am doing the best I can" and commit to writing a list of all your positive qualities that you can add to and look at when you are being critical of yourself.

- Come back to the center of the triskelion, open your eyes when you are ready, and write down all you experienced, along with your affirmation and ideas for change.

As mentioned, the triskelion represents the relationship of mind, body, and spirit but also shows that we have to work on all three aspects to keep a healthy balance. This does not mean that we should be working on everything at once, however. It is recommended that you choose only one path to walk along during this meditation, otherwise you may feel overwhelmed with all the changes you wish to make.

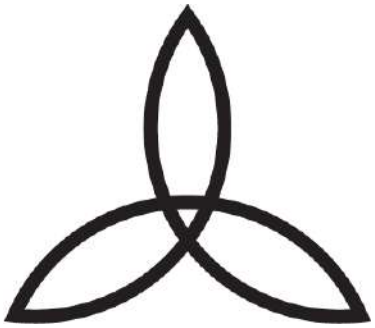
Reuleaux Triangle

Within the center of the tripod of life is a convex triangle. This shape was discovered by German engineer Franz Reuleaux in the nineteenth century. This shape has been used in the design of furniture and buildings, and it is often seen in church windows, as either a sole Reuleaux triangle or with other geometry inside, such as a triquetra. As with other triangles and three-sided shapes, the Reuleaux triangle represents the Holy Trinity. A three-dimensional form of this shape is called a Reuleaux tetrahedron.



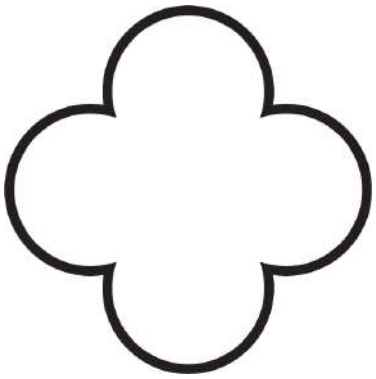
Triquetra

Tracing the lines of the three overlapping circles in the tripod of life gives us the triquetra. This is similar to the mandorla in the vesica pisces, as it is used to represent the joining of heaven and earth. The triquetra can be said to symbolize the Christian trinity of the Father, Son, and Holy Spirit. In pagan terms, it is known as the triple goddess: maiden, mother, and crone. The triquetra is often used in Celtic artwork with the lines interlinked, along with a circle, and is referred to as the “triple knot.” Knots are used to symbolize a strong bond or link. The triple knot has the same meaning as the triquetra, but with the added meaning of eternity portrayed by the circle.



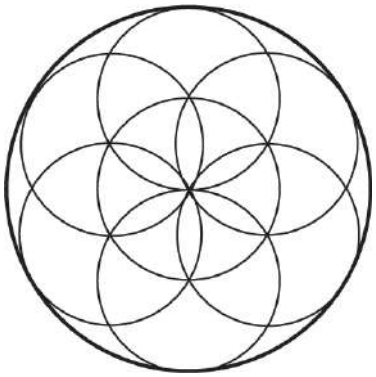
Quatrefoil

The word *quatrefoil* is derived from the Latin *quattro folium*, or “four leaves.” The quatrefoil is a common shape in decoration, and it can be formed by overlapping four circles. Sometimes the quatrefoil outline will include a square, referred to as a barbed quatrefoil. As with the trefoil and triangle, this is essentially the combination of feminine circles and masculine straight lines. In Christianity, the number four corresponds to the four Gospels, and the quatrefoil is often used as decoration in stained-glass windows. Not all quatrefoils have round arms; sometimes a pointed quatrefoil is used in decoration. This is formed by outlining the overlapping centers of four circles, and the resulting shape closely resembles the flower in the seed of life. There are also examples of repeating patterns using quatrefoils with mixed round and pointed arms.



Seed of Life

The seed of life is sometimes referred to as the Genesis pattern. It is made up of six overlapping circles, creating a flower with six petals in the center, and it has a seventh circle around the perimeter. The concept is somewhat difficult to grasp, but the pattern has a definite center, something like a period, which is considered to be the seed from which flows everything else. As with all seeds, this shape represents beginnings. Other shapes, such as the hexagon and hexagram, can be found in the seed of life, and it is also the beginning of the flower of life.

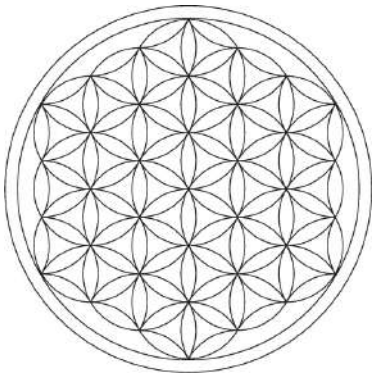


Sometimes the seed of life has been used to represent the seven days of creation: each circle representing one day, with the seventh circle completing the cycle. Some illustrations, however, start with vesica pisces being the first day due to the fact that God is represented by one circle. Duality, and therefore the beginning of creation, would begin with two circles. This means that the seventh circle would be placed on day six, leaving the seventh day as a day of rest.

The central flower of six petals, with or without the surrounding circle, has sometimes been used by itself in artwork, but the form is also used for some amulets of protection, although this could stem from Slavic mythology, which had a similar icon representing the god of thunder. The number six is also attributed to moving on and learning from experience. We consider that the “sixth sense” refers to hunches, premonitions, or acting upon instinct.

Flower of Life

The flower of life consists of nineteen overlapping circles with a circle (or double lined circle) around the perimeter. This shape is considered to represent manifestation and creation. Many sacred geometry shapes are found within the flower of life, making it one of the most frequently used illustrations. The flower of life is regarded as an image of balance and harmony. It has been adopted as decoration in religious buildings, and the proportions are found in fine art.



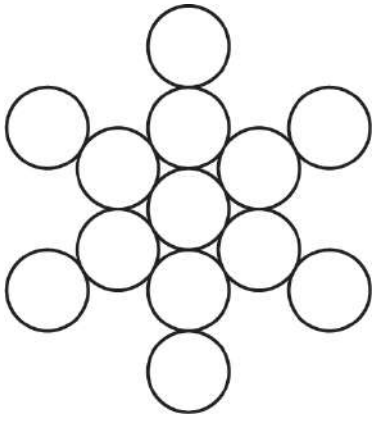
There are examples of the flower of life being used throughout history for decoration. In the Forbidden City in Beijing, China, a fu dog (guardian lion) holds a globe carved in a flower of life pattern under its paw. At the Golden Temple in Amritsar, India, the flower of life is used as a pattern in the floor tiles, and it is also used as a floor mosaic in Pompeii, Italy, to name just a few.

The flower of life pattern has been studied by many people at length throughout the centuries, including Leonardo da Vinci, who drew many sketches of it in his notebooks. The flower of life leads us to the fruit of life.

Fruit of Life

This shape is found inside the flower of life, and it consists of a central circle surrounded by six circles touching boundaries. Another six circles are touching the surrounding circles, making thirteen in total. In nature, life begins with the seed, and then comes the flower, and finally the fruit, which is the promise of new life to come. Fruit represents fertility, abundance, and good health. Examples of fruit appear in religion and mythology, such as Adam and Eve's knowledge, which began with the eating of the apple. Grapes correspond to Bacchus, the Roman god of wine, while pomegranates are connected with the story of Persephone and Demeter, the mother and daughter who are associated with growth, the harvest, and Hades, the god of the underworld.

The number thirteen is seen as unlucky in some cultures, so much so that there is a word for it, *triskaidekaphobia*, in Greek, which breaks down as *tris* = three, *kai* = and, *deka* = ten, and *phobia* = fear. It is unknown where this fear originates, but there are plenty of examples that compound the belief. For instance, there were thirteen people at the table during the Last Supper, the Knights of Malta were destroyed on Friday the thirteenth, the Apollo 13 mission had to be abandoned due to a malfunction, and thirteen witches were found guilty and executed in the Salem witch trials. In tarot, the thirteenth Major Arcana card is Death, although this does not literally mean dying, as it refers to the end of one matter and the beginning of another. This closely echoes the theme of beginnings in the fruit of life.



There are occasionally thirteen full moons in a year. The full moon is also associated with completion, as after this it begins to wane. The moon

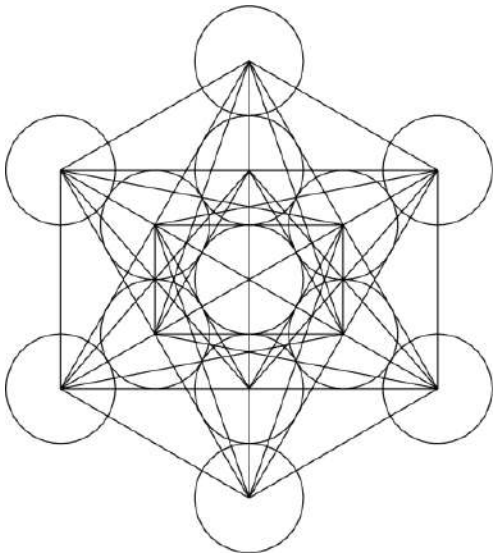
moves thirteen degrees during the course of a day, and the planet Neptune has thirteen moons. The fruit of life represents the basis of all that is, because it is the first step in creating Metatron's cube, within which many shapes are found, including all the Platonic solids (see chapter 3).

Metatron's Cube

From the fruit of life, a line is drawn from the center of each circle to the center of all the other circles. There are thirteen circles and seventy-eight lines in this shape. The equation $78 \div 13 = 6$ gives us the number of outer circles, and $13 \div 78 = 0.166\ldots$. This is close to the number phi, which is described in chapter 6.

As circles are seen as feminine and lines as masculine, so Metatron's cube is a representation of balance of both these energies. The five Platonic solids are found within the image of Metatron's cube.

Archangel Metatron is associated with the Akashic Records, which are accounts of all events in the universe: past, present, and future. As such, he represents knowledge and wisdom and is seen as a spiritual guide. Consequently, Metatron's cube is symbolic of our journey through life, and the fact that it embodies all other forms of geometry shows us how everything in the universe is connected. Due to its significance, Metatron's cube is often used as decoration and as a focus for meditation.



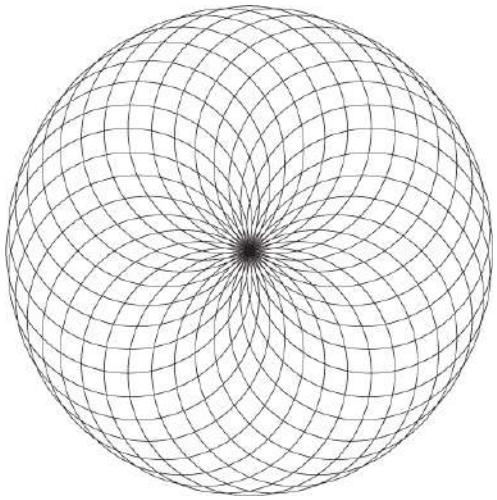
A Metatron's Cube Meditation

You will need twelve crystals (preferably clear quartz).

- Sit in the center of a large space (on the floor or on a chair) and surround yourself with a circle of six crystals, evenly spaced.
- Then place another six crystals in line with the first crystals; these represent the center of each of the circles in Metatron's cube.
- Ask Archangel Metatron to join you and visualize yourself surrounded by a beautiful pink sphere, representing the central circle. Pink is the color of self-love.
- The six crystals surrounding are encompassed by green light, and the outermost crystals are surrounded by indigo light. Green is the color for expansion and growth, and indigo is connected with knowledge and wisdom.
- Visualize yourself connecting with each crystal in turn.
- • Next, visualize each of the crystals connecting with all the other crystals in Metatron's cube, creating a net of energy with you at the center. This may be done as quickly or as slowly as you like.
- Now either sit and enjoy the energy of connection, or perhaps ask Metatron a question concerning your spiritual path.
- At the end of the meditation, thank Archangel Metatron for joining you and open your eyes when ready.

Torus

A two-dimensional torus is created by drawing many circles around a central point. This is then surrounded by a large circle. This shape is seen as a representation of flow with many lines moving in different directions. This torus also contains an optical illusion because staring at the whole image gives the illusion of concentric white circles, but attempting to stare directly at the intersections where a white dot should be causes the white dot to disappear!



Triangle

The triangle is a three-sided polygon, although the sides may be different lengths. A triangle with all three sides the same length and all internal angles the same is called an equilateral triangle. This is the type of triangle most used in symbolism, as it represents balance. Triangles are used as symbols to represent occurrences of threes, including anything that has a beginning, middle, and end, such as the past, present, future, or birth, life, death, or flower, fruit, seed, and so on.

In the pagan and Wiccan faiths, triangles facing in different directions and double triangles are used to represent earth, air, fire, and water. In Christianity, a triangle symbolizes the Father, Son, and Holy Spirit. An equilateral triangle is also used pointing upward to represent male energy, and downward to represent female energy.

The Sierpinski triangle is a type of fractal (never-ending) pattern that starts with an equilateral triangle. An equilateral triangle that is a third of the size and at 180° to the original is then removed from the center. This sequence is consequently repeated for every triangle still remaining.

The Karpman drama triangle is an interesting example of how a triangle can portray relationships. Created by Stephen Karpman, the drama triangle has one corner named “persecutor,” the second is “victim,” and the third is “rescuer.” The triangle can be used to assess interactions that are unhealthy, like arguments, showing how people can slide from one corner to another, such as the persecutor showing traits of the victim and vice versa. This can help people to remove themselves from the triangle and end the drama.

A three-dimensional form shaped like a pyramid with a triangular base, is called a tetrahedron. Triangles are also present in two more three-dimensional shapes, an octahedron and an icosahedron.

Tetractys

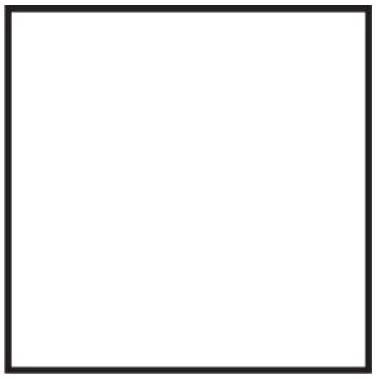
Triangular numbers are integers that have a dot for each digit that can be arranged in the shape of a triangle. The tetractys, meaning “the holy fourfoldness,” is a triangle of ten dots. At the top is one dot (monad), the next level is two dots (duad), then three dots (triad), and at the bottom are four dots (tetrad). The number ten (decad) was considered by the Pythagoreans to be the perfect number, so the tetractys was seen as an important symbol. Other triangular numbers include 1, 3, 6, 15, 21, and so on.

Tip

An integer is a whole number rather than a fraction.

Square

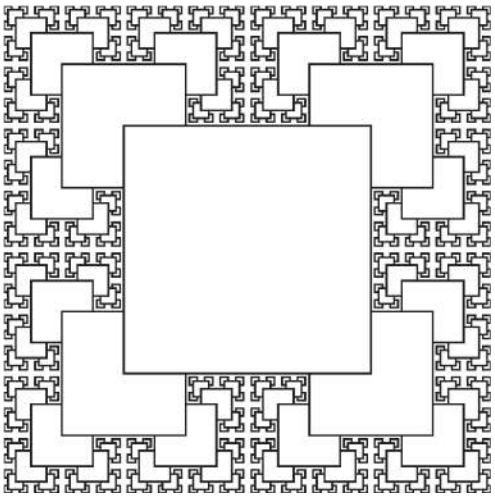
A square is a four-sided polygon. Four-sided shapes are also referred to as a quadrilateral, quadrangle, or tetragon, but squares have interior angles of 90° and four sides of equal length. Squares can be divided once diagonally to form two right-angled triangles (one angle of 90°), or divided by both diagonals to create four isosceles triangles (triangles with two sides the same length).



As the square has four corners, it is often used to symbolize patterns in nature that occur with the number four, such as the four seasons (spring, summer, fall, winter), the cardinal directions (north, south, east, west), and the four elements of the zodiac (earth, air, fire, water). Squares are also used to symbolize the earth element, stability, and the material world, as opposed to the spiritual world. Sometimes the word *square* is used to describe someone who is unbending, plays it safe, or doesn't "go with the flow."

"Squaring the circle" was a phrase given to the attempts in ancient times to draw a square with the same area as a circle, using only a straightedge and a compass. Because no one has ever been able to achieve this, the phrase is now sometimes used to mean "attempting the impossible."

The Sierpinski carpet is a fractal pattern similar to the Sierpinski triangle: a square is divided equally into nine smaller squares (3 × 3) and the central square is then removed, leaving eight squares. Each of these squares is then divided into nine, and the central square is again removed, leaving sixty-four squares (8 × 8). This process can be continued indefinitely. The three-dimensional cube is created from six squares.



Pentagon

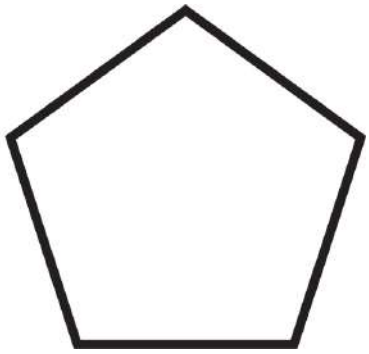
A pentagon is a five-sided polygon with all the sides being the same length. A pentagon can be split into five equilateral triangles. This shape represents the marriage of male and female, two being a female number and three a male number: 3 + 2 = 5. For this reason, the number five can represent change and the potential of new beginnings. Fives may also suggest being at a halfway point. Many flowers have five petals, and flowers could be viewed as the halfway point from seed to fruit.

In certain belief systems, there are five elements to life, such as earth, air, fire, and water, with the fifth element being spirit or ether—or, in the Chinese system, wood, fire, earth, metal, and water. For this reason, five can represent manifestation and creation.

Pentagons are used to form the dodecahedron, a three-dimensional shape. Adding a golden triangle (described in chapter 6) to each edge of a pentagon forms a pentagram.

Pentagram/Pentacle

The pentagram is an arrangement of triangles surrounding a pentagon, often placed inside a circle. The triangles in the shape are isosceles, meaning that two of the sides are the same length and two of the angles are of equal size. Pentagrams have often been used to represent the stars in the night sky. This shape is a common symbol for many applications today, such as the following:

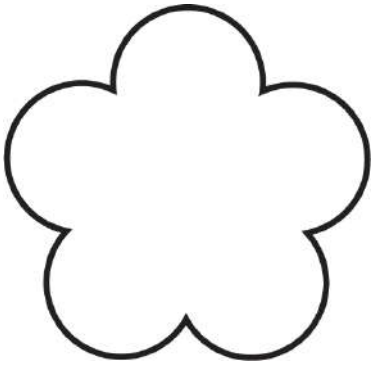


- The human body can form a pentagram, by standing with legs apart and arms straight out at the sides, the head being the upward-pointing triangle. This pentagram is also used to represent the hand, with each point corresponding to a finger or thumb.
- This symbol is used to represent paganism and Wicca, and it is also used on tarot cards to represent security and wealth.
- It can be used spiritually to represent earth, air, fire, water, and spirit.
- Pentagrams can also be found in the image known as the lute of Pythagoras. This is a sequence in which each successive pentagram is partially formed by the previous one.

Cinquefoil

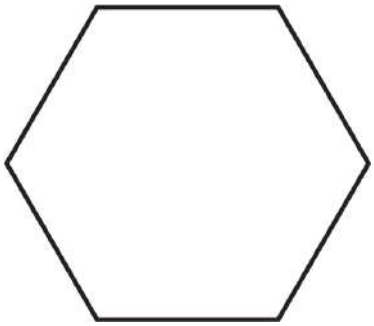
Although this word looks French, it may be a combination of Italian and ancient French that comes from the Latin root, which is *quinque foliis*, meaning “five leaves.” This refers to the five overlapping circles resembling the leaves of some plants, in the same way as trefoil (three leaves) and quatrefoil (four leaves).

This shape is frequently found in church window decorations, as either a whole or just the top three circles. The ancient Romans called the cinquefoil “Rose of Venus,” and it was said to symbolize womanhood.



Hexagon

A hexagon is a six-sided polygon with all sides being the same length. Six is considered a mathematically perfect number, due to the fact that all the numbers with which it can be divided can be added together to make six, as in 3 + 2 + 1 = 6. Other perfect numbers discovered by the Pythagoreans are 28, 496, and 8,128, but in recent times, other perfect numbers have been identified. Six is associated with time because minutes and hours are multiples of six. It is also regarded as the number of union and marriage, and hexagons thus represent harmony and balance. This polygon can be effectively tiled, as found in nature and architecture: the flower of life is a hexagonal pattern and could be added to indefinitely.



Hexagram

The hexagram is sometimes known as the Star of David or the Seal of Solomon. This is the name for two interlaced triangles, with one pointing upward and the other pointing downward. In the center is found a hexagon.

The upward-pointing triangle represents male energy, while the downward-pointing triangle is female energy. In the hexagram, there is the combination of the two, symbolizing balance of the masculine and feminine aspects. The hexagram is also present in the heart chakra symbol, because this is the energy point at the center of the body. When this chakra is in balance, there is equality between giving and receiving and a balance between earthly, practical matters and things that can't be touched, tasted, or seen, such as knowledge, ideas, and spiritual matters. It is also said to represent two triangles, one pointing to heaven and the other to earth, and thus the saying "as above, so below."

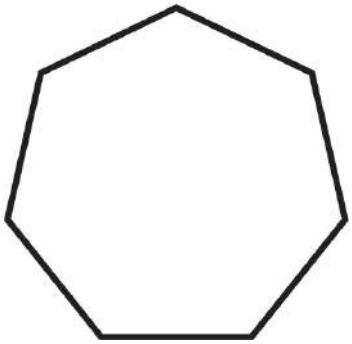
A six-pointed star can also be formed with six rhombi, which is equivalent to twelve equilateral triangles. Another form of hexagram is the Koch snowflake. It begins with an equilateral triangle, and each edge is divided into three, with a triangle drawn in the middle third. This pattern is repeated until the resulting shape resembles a snowflake. A never-ending pattern such as this is known as a fractal or self-similar. A hexagram in three-dimensional form, with two triangular pyramids (tetrahedrons), is called a star tetrahedron.

Heptagon

This is a seven-sided polygon with all sides being the same length. This shape is sometimes known as the septagon, but because *sept* (meaning "seven") is Latin, while *hept* (also meaning "seven") and *gon* ("angles") are both Greek, heptagon is the more widely accepted name.

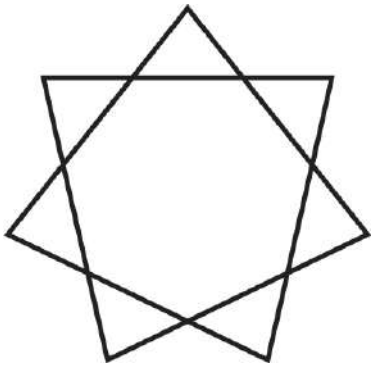
Seven is seen as a sacred number in many religions and spiritual beliefs. The number seven symbolizes the combination of number three, representing heaven or spirit or soul, and number four, symbolizing earth or body. There are also many other applications of the number seven, such as the seven days in a week, seven colors in the rainbow, seven years of bad luck after breaking a mirror, and seven notes on a diatonic scale.

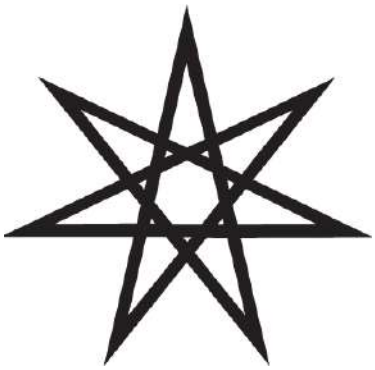
This number can also represent pause and consideration, a time to focus, to take stock, or to work on problem solving. In tarot, the Chariot card is the seventh in the Major Arcana, and in a lot of decks this card has two sphinxes pictured on it—sphinxes represent riddles and perception. As such, a heptagon can be used to symbolize knowledge and wisdom that is gained.



Heptagram

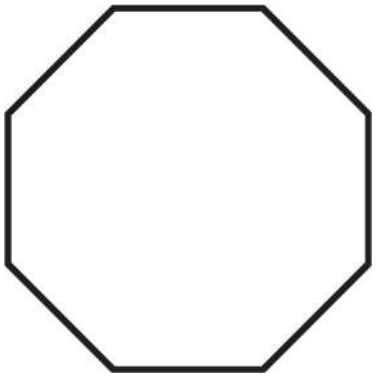
There are two stars that can be formed from a heptagon: the obtuse heptagram and the acute heptagram. The obtuse heptagram can easily be formed by placing a triangle on each edge of the heptagon, whereas the acute heptagram is created from extending the edges of the heptagram's triangles until the lines meet. The heptagram is used as a symbol for many different subjects and ideas, often covering religious beliefs, but as with the heptagon, it can also be used to represent any seven objects or ideas.





Octagon

An octagon is an eight-sided polygon with all sides being the same length. The octagon can symbolize eternity, with the number eight bearing similarity to the symbol for infinity. Eights are also seen as a prosperous number, and an octagon is used in the Taoist system of feng shui, which is the practice of arranging furniture in a building to create optimum energetic stability.



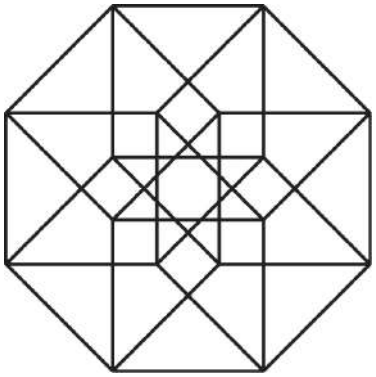
Octagram

An eight-pointed star is known as an octagram. The octagram is often shown in two different ways: The first can be formed by drawing a square, then drawing another square at a 45° angle. The second is created by drawing a continuous line from one of the inside angles of an octagon to the third angle along, creating a star shape. Both of these octagrams have an octagon in the center. As with the octagon, octagrams are used to symbolize infinity, as well as certain religious ideas.

Octagrams are also seen on the face of a compass, denoting not just the cardinal points, but the intercardinal points as well. The cardinal points are north, south, east, and west, while the intercardinals are northeast, southeast, and so on.

Hypercube

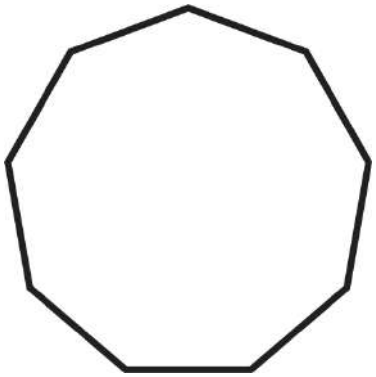
A hypercube is created with eight squares that have a corner touching both the next square and the previous one. In a two-dimensional hypercube, this forms a large octagon with an octagram in the middle and another octagon in the very center. A three-dimensional hypercube appears to consist of three rectangular prisms. The hypercube is said to symbolize four dimensions: length, width, height, and time.



Nonagon

A nonagon is a nine-sided polygon with all sides the same length, sometimes known as an enneagon. It would be more correct to use the term *enneagon* to describe this shape, as *ennead* "nine") and *gon* ("angle" or "edge") are both Greek, whereas *non* (from the word *nonus*, which means "ninth") is Latin, but *nonagon* seems to be the more commonly used word.

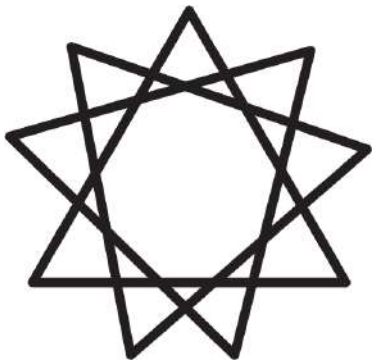
The number nine is seen as either good or bad, depending on the culture. The Pythagoreans associated this number with failure, due to the fact that nine is just short of the perfect ten. On the other hand, nine is significant in a few different religions, and the system of numerology is based on the numbers one to nine. In some beliefs, nine is seen as the number of completion, with a new beginning starting with the number ten. This is echoed in the nine-month gestation period in humans. The nonagon is sometimes used to represent self-reflection and learning from lessons before moving on.



Nonagram

A star consisting of nine points is known as a nonagram. A nonagram of three interlinking equilateral triangles is known as the star of the muses after the nine muses in Greek mythology. This arrangement of triangles is a type of Brunnian link, which is similar to Borromean rings, but it can be created with any interlinking shapes. In the center of these three triangles there is a nonagon.

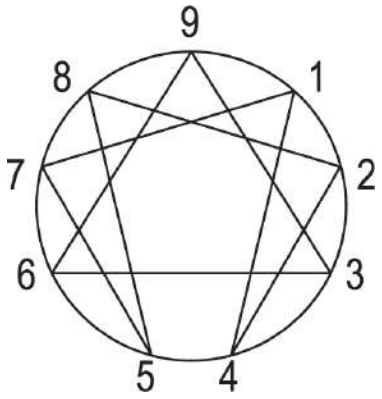
There is another nine-pointed star with a nonagon in the center, which is called the Ninefold Goddess in the pagan and Wiccan faiths. This star is created by a continuous line starting at one inside angle of a nonagon and connecting to the fourth angle along each time, until the beginning point is reached. Each point represents an aspect of the Ninefold Goddess.



Enneagram

An enneagram is a nine-pointed shape with an open base, surrounded by a circle. The enneagram is most commonly used in the Enneagram of Personality system, which attributes a type of personality to each point as follows:

1. The reformer
2. The helper
3. The achiever
4. The individualist
5. The investigator
6. The loyalist
7. The enthusiast
8. The challenger
9. The peacemaker



THE ENNEAGRAM OF PERSONALITY SYSTEM

The lines traveling from one point to the next show the connection and relationship between different aspects of personality, showing how we react when we are stressed or when we feel secure. For example, a personality type 3, the achiever, if stressed is likely to try to avoid a situation or to procrastinate (negative qualities of a personality type 9), whereas if they are feeling secure they may exhibit faith or courage (positive qualities of a personality type 6).

The Enneagram of Personality system can aid us with self-development by helping us to assess our own behavior and recognize behaviors in others; it is sometimes used as a reference for managers in businesses for this purpose.

No.	1
Role	Reformer
Ego Fixation	Resentment
Holy Idea	Perfection
Fear	Corruptness
Desire	Integrity
Temptation	Hypercriticism
Vice	Anger
Virtue	Serenity
Stress	4
Security	7

No.	2
Role	Helper
Ego Fixation	Flattery
Holy Idea	Freedom
Fear	Being unloved
Desire	To feel love
Temptation	Manipulation
Vice	Pride
Virtue	Humility
Stress	8
Security	4

No.	3
Role	Achiever
Ego Fixation	Vanity
Holy Idea	Hope
Fear	Worthlessness
Desire	To feel valued
Temptation	Overworking
Vice	Deceit
Virtue	Truthfulness
Stress	9
Security	6

No.	4
Role	Individualist
Ego Fixation	Melancholy
Holy Idea	Origin
Fear	Insignificance
Desire	Identity
Temptation	Overthinking
Vice	Envy
Virtue	Emotional balance
Stress	2
Security	1

No.	5
Role	Investigator
Ego Fixation	Stinginess
Holy Idea	Transparency
Fear	Helplessness
Desire	Mastery
Temptation	Replacing direct experience with concepts
Vice	Avarice
Virtue	Non-attachment
Stress	7
Security	8

No.	6
Role	Loyalist
Ego Fixation	Cowardice
Holy Idea	Faith
Fear	No support
Desire	Support & guidance
Temptation	Indecision
Vice	Fat
Virtue	Humility
Stress	8
Security	4

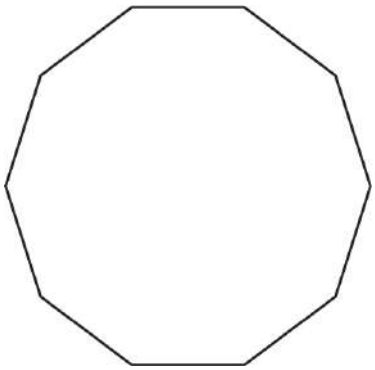
No.	7
Role	Enthusiast
Ego Fixation	Planning
Holy Idea	Wisdom
Fear	Deprivation
Desire	Satisfaction
Temptation	Thinking fulfillment is somwhere else
Vice	Gluttony
Virtue	Sobriety
Stress	1
Security	5

No.	8
Role	Challenger
Ego Fixation	Vengeance
Holy Idea	Truth
Fear	Being Controlled
Desire	Self-protection
Temptation	Thinking they are completely self-sufficient
Vice	Lust
Virtue	Innocence
Stress	5
Security	2

No.	9
Role	Peacemaker
Ego Fixation	Indolence
Holy Idea	Love
Fear	Loss
Desire	Peace of mind
Temptation	Avoiding conflicts
Vice	Sloth
Virtue	Action
Stress	6
Security	3

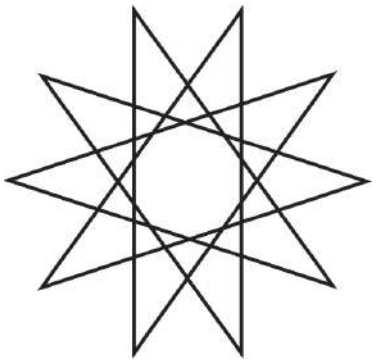
Decagon

A decagon is a ten-sided polygon, all sides being the same length. Each internal angle is 144°. Ten was considered the perfect number by the Pythagoreans, because if both digits are added together, the result is one, which was believed to be the number of the Creator. The number ten is seen as the completion of a cycle, and it can represent determination and hard work paying off. The decagon can symbolize a deeper understanding of a situation or an achievement.



Decagram

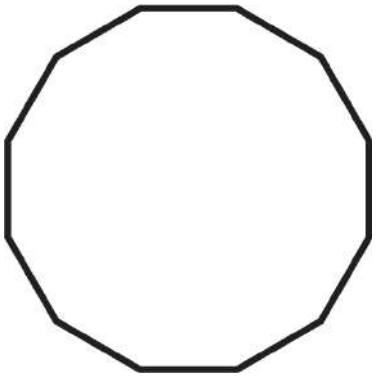
A ten-pointed star, known as a decagram, can be created with either a double pentagram with one pointing up and one pointing down, or by drawing a continuous line starting from one inside angle of a decagon and going to the third angle along each time until reaching the starting point.



Dodecagon

A twelve-sided polygon with all sides the same length is called a dodecagon. Each internal angle is 150°. This shape is used to represent ether or the universe. Twelve is considered to be the number of perfection and cosmic order. Twelve appears many times in religions and mythology. It is also an interesting number mathematically: $12 \times 12 = 144$, which happens to be the internal angle of the dodecahedron. The number 144 is also twelfth in the Fibonacci sequence.

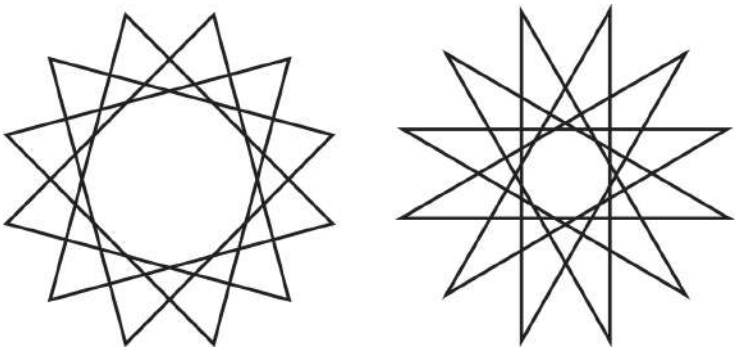
Time is measured in two twelve-hour periods, with twelve numbers on a clock. The number twelve appears in the number of months in a year and thus the number of zodiac signs. There are also usually twelve full moons in a year. In the Chinese zodiac, there are twelve animals, with a different animal year coming into play at each Chinese New Year. This is linked to the orbit of Jupiter, which takes twelve years to circle the sun. As such, twelve can be associated with completion, endings, and cycles.



Dodecagram

The dodecagram can be created in two ways: the first is with four overlaid equilateral triangles, and the second is by drawing a continuous line starting at one inside angle of a dodecagon and going to the fifth angle along each time until returning to the starting point.

The dodecagram sometimes appears in illustrations of the zodiac signs. This polygram is found in the center of a circle with twelve spokes. The zodiac signs correspond to the positions of the sun from our point of view during the course of the earth's annual orbit around the sun.



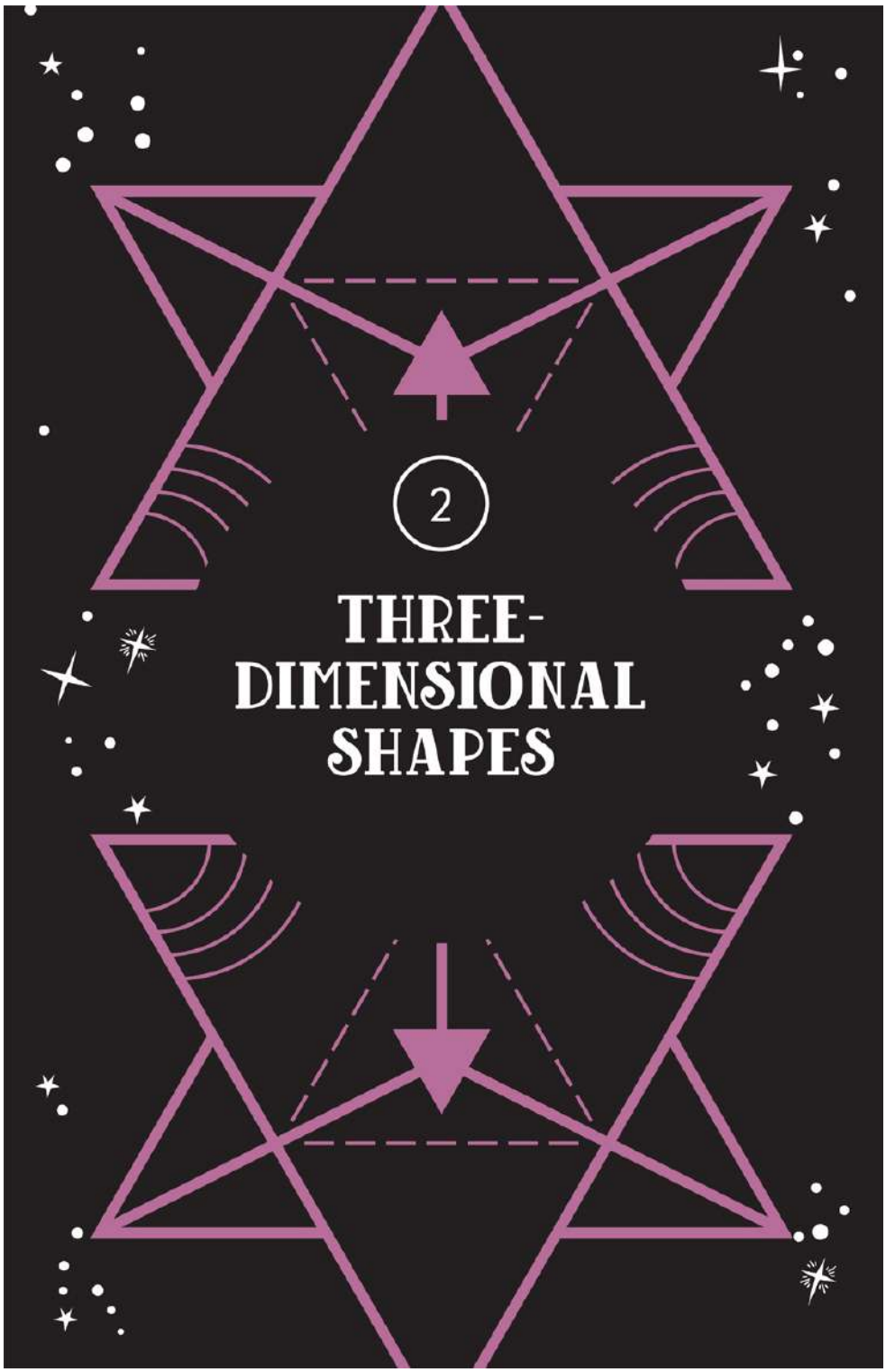
A Summary of Two-Dimensional Shapes

Vertices/ Number of Shapes	Associated Shapes	Keywords
1	Circle	Eternity, Creator, one
2	Vesica pisces	Duality, union
3	Tripod of life, triquetra, trefoil, triskelion, triangle, Reuleaux triangle	Trinity, balance
4	Square, quatrefoil	Seasons, cardinal directions
5	Pentagon, pentagram, cinquefoil	Elements, nature, combination
6	Hexagon, hexagram	Balance, time, harmony
7	Heptagon, heptagram, seed of life	Turning point, change
8	Octagon, octagram	Infinity, prosperity, growth
9	Nonagon, nonagram, enneagram	Cycle ending, wisdom
10	Decagon, tetractys (ten dots), decagram	Perfect number, completion
12	Dodecagon, dodecagram	Ether, Universe, Creator, cosmic order
13	Fruit of life	Origin, starting point
19	Fiower of life	Progress, enlightenment, awakening

SACRED GEOMETRY ACTIVITIES

Two-dimensional shapes are perfect for illustrations, artwork, and grids. It is easy to introduce this type of geometry into our homes as pictures, or to concentrate on a two-dimensional form for meditation.

Two-dimensional shapes could also be incorporated into a mindfulness activity; look around the area you are in now and see how many of the sacred geometry polygons you can spot. Another mindfulness task would be to draw some of the two-dimensional forms and be aware of feeling the paper and pencil, how the pencil sounds as it moves across the paper, and how the polygon slowly takes shape.



Shapes with three dimensions have height, width/length, and depth. Whereas two-dimensional shapes are flat images, three-dimensional shapes

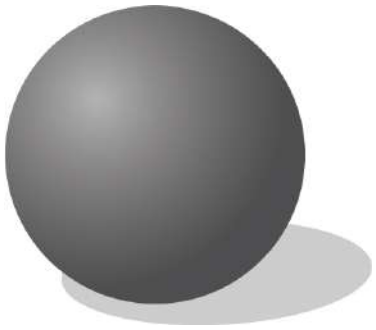
can be created as solid objects, meaning that this type of sacred geometry can be touched and observed from more than one angle.

If you are able to obtain one of the three-dimensional objects listed in this chapter, this can be a good way of meditating if sitting with your eyes closed does not work for you: simply examine the object from every angle, using your fingers to trace the shape, observing how the light plays over the surface and feeling the weight of it in your hands. The idea is to clear your mind of any thoughts and just focus on the object. You may also like to think about the object's properties listed in this chapter and what these properties mean to you.

Sphere

A sphere is completely round like a ball and is sometimes referred to as an orb or a globe. Spheres represent wholeness and completeness. All areas of a sphere's surface are the same distance from the center, thus symbolizing perfection.

Spherical shapes are often found in nature, including some fruits and vegetables, a dandelion seed head, rocks that have been worn by the weather, and even bubbles. The stars and planets are also spheres, and the sky was once seen to resemble a half sphere, or a dome. Domes have been used to decorate religious buildings and shrines, due to the idea that this particular shape focuses energy. Examples of buildings in the shape of a sphere include:



- La Seine Musicale in Paris, France
- La Géode Cinéma in Paris, France
- Ericsson Globe Arena in Stockholm, Sweden
- Amazon Spheres in Seattle, USA
- Nagoya City Science Museum in Nagoya, Japan

During coronations of a king or queen, an orb known as *globus cruciger* (Latin for "globe and cross") is held by the incoming monarch. The cross is a symbol of God and the globe represents the world. Spheres are also used for energetic protection, so visualizing oneself in a gold or silver sphere can deflect toxic energy and intent from other people or situations.

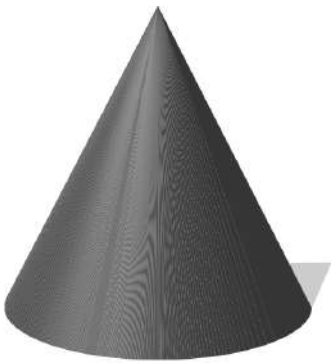
A Meditation for Gold Sphere of Protection

- Visualize a golden ray of light coming down from the Universe (or God/ Goddess/Creator, whichever term resonates most with you).
- As this ray of golden light reaches a point above your head, the light spreads outward and downward to surround you in a beautiful golden sphere.
- Visualize the golden light coming to a point underneath your feet and continuing to the center of the earth.
- You are now connected with heaven and earth and shielded from other people's negative intentions.

The sphere should remain in place throughout the day, but if you have experienced a particularly trying situation, you may like to renew your intention; this visualization can be done as often as you feel you need to.

Cone

Cones usually have a circular base and come up to a point. This shape can be found as ice cream cones, party hats, and traffic cones. Hollow cones are an ideal shape for stacking, as they do not need to be placed in a particular way to fit together. In nature the pinecone has a large base and tapers up to a point, and the mountainous sides of a volcano are known as a cone. The pinecone is actually considered a symbol of enlightenment, due to its similarity in appearance to the pineal gland, which sits behind the third eye chakra in the center of the forehead.



The human eye has light receptors at the back of the eye that are called cones, owing to their shape. Early human settlers built roundhouses, which had conical thatched roofs. Today, some notable examples of conical architecture include:

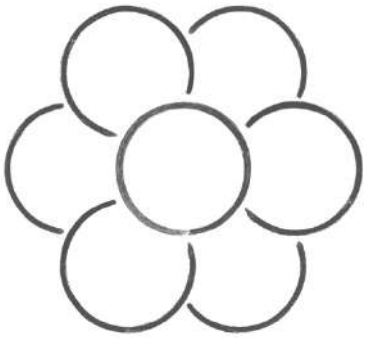
- Cathedral of Maringá in Brazil
- Wheelock Place Shopping Mall in Singapore
- Ehime Prefectural Science Museum in Shikoku, Japan
- Conical tower at the University of Southern Indiana, USA

There are also some remarkable buildings that resemble upside-down cones, including the Grand Central Water Tower in Johannesburg, South Africa, and a water tower in the port of Marseille, France. Cones can symbolize a focal point when illustrated with the point downward, like a funnel channeling a liquid to the smallest point. Cones can also portray illumination when the point is at the top, like the light from a spotlight that broadens as it shines down.

Egg of life

The egg of life consists of eight circles or spheres (although only seven are visible). It can be found in the flower of life when all the intersecting lines are removed, starting with the center circle.

Eggs symbolize birth, beginnings, and the early stages of growth. The egg of life can be seen reflected in nature when a single cell splits into two, each of these two splits to create four cells, then each of the four cells splits into two to become eight cells. For this reason, the egg of life also symbolizes fertility. As mentioned earlier, eights are associated with infinity, and the egg of life is a representation of the continuous change and renewal that happens throughout life. Eggs can also portray upheaval that has to occur in order for new life to begin. Eggs have to be broken for a baby animal to emerge, so beginnings can happen only after the end of something else.

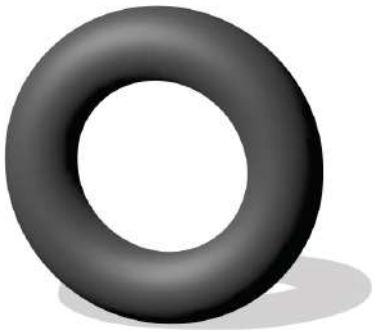


Torus

The three-dimensional version of the torus is formed by a two-dimensional circle (i.e., two directional: up and across) being rotated around a single point along the third dimension. This creates a tube that eventually comes back to where it started and results in a shape that resembles a donut.

The torus is considered important in many spiritual practices. This shape is the way in which the human energy field (also known as the aura) interacts with the physical body and also the way the magnetic field surrounds the earth. As such, the torus represents the natural flow of energy and life.

A form of torus appears in religious artwork as a halo above the heads of the saints and angels. Here the torus embodies the symbolism of a three-dimensional circle to represent eternal life. The Phoenix International Media Center in Beijing, China, is a horizontal torus-shaped building that rests completely on the ground, whereas the Sheraton Huzhou Hot Spring Resort in Beijing features a vertical torus-shaped building that is partially submerged in Lake Tai.



A torus knot is formed when the torus loops through itself, usually forming three hoops (called a trefoil knot), but in some artwork there may be more. The torus knot epitomizes perpetual motion.

A Torus Meditation

This meditation focuses on the body's energy field and the breath.

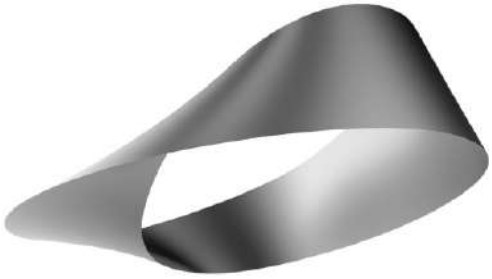
- Sit comfortably and close your eyes.
- As you breathe in, visualize energy moving up the center of your body and coming out of the top of your head like a fountain.
- As you breathe out, visualize this energy smoothly moving downward and surrounding you, going to a point underneath your feet where it starts to move upward on the next breath in.
- Continue this until you can easily visualize the energy moving in a torus formation: upward through the center of your body on the in breath, and downward around the outside of your body on the out breath.
- Next, take your attention to your breath.
- Slow your breathing and, at the end of your next inhalation as the energy is coming out of the top of your head, exhale with no pause.
- At the end of your exhalation, when the energy has just passed under your feet and is moving toward the center, inhale with no pause.

The idea is that just as your body's energy flows continuously without stopping, so your breathing will follow the same pattern. It may take some practice before you are able to fully relax and find a breathing pattern that works for you.

Möbius Strip

Closely related to the torus knot is the Möbius strip, which was created in 1858 by German mathematician August Möbius (1790–1868). He took a strip of paper and gave it one twist before joining the ends together, resulting in a shape where the outside seems to swap to the inside. Although it is a three-dimensional shape, it has only one edge and one side. The Möbius transformation, as it is also known, symbolizes the flow of life and its cycles. As with the circle and the torus, this shape also portrays eternity.

The Möbius strip is also a good representation of the saying "as within, so without." Whatever we think, feel, and believe on the inside will ultimately affect how we behave outwardly. And how we treat our body—the way we sit and stand, and whether we get enough rest or exercise, etc.—has a big effect on how we feel inside.



3
PLATONIC
SOLIDS

The Platonic solids are named for the philosopher and mathematician Plato, after he wrote about five three-dimensional shapes, the faces of which are created from identically sized and shaped polygons. A three-dimensional solid shape with flat faces, straight edges, and vertices (corners) is known as a polyhedron. The word *polyhedron* comes from the Greek *poly* meaning "many" and *hedron* meaning "face." All the Platonic solids are regular polyhedrons.

Each of the Platonic solid polyhedrons fits perfectly within a sphere, with all the corners touching the outside edge of the sphere, and they have the same sized faces with edges of identical length. Each of the Platonic solids can be found in the flower of life and Metatron's cube. The seventy-eight lines that connect the thirteen circles of Metatron's cube (one central circle, six surrounding circles, and six circles in line with each of the surrounding circles) form the sides of three-dimensional illustrations of the Platonic solids.

Mathematicians have also discovered that there are duals of the Platonic solids—a dual being a polyhedron whose vertices are at the center of all the faces of another polyhedron. If the vertices of the dual are extended outside the original polyhedron, the vertices of both shapes are visible, and this is called a compound dual.

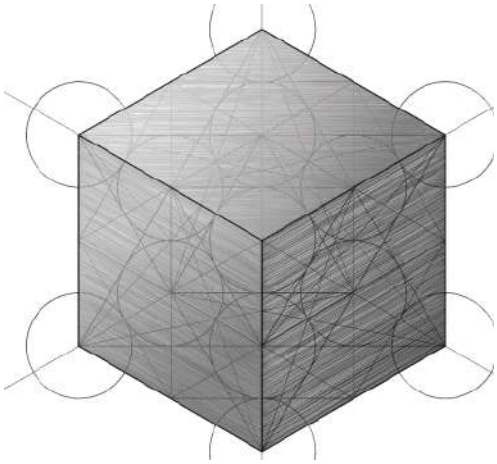
Cube

The cube (also known as a hexahedron) has six square faces, eight vertices (corners), and twelve edges. Like the square, the cube represents the earth element and the base chakra. The cube symbolizes foundations and stability, owing to its rigid structure. An unfolded cube forms the shape of a cross, which is an important symbol in Christianity.

The base chakra is connected with survival and instinct. For us to feel safe and secure, there are certain things we need in life, such as enough food and water for survival. Having a home enables us to have a feeling of stability, and if all our survival needs are met, this provides the base chakra with a good foundation for balanced energy.

The Sierpinski sponge, which is also known as the Menger sponge, is a fractal pattern of the same format as the Sierpinski carpet (described under Square in chapter 1), but in three-dimensional form: A cube is divided into twenty-seven smaller cubes ($3 \times 3 \times 3$) and the central cube is removed along with the center cube from each face, leaving twenty small solid cubes and seven hollow spaces. Each of these solid cubes is then also divided into twenty-seven smaller cubes, and again the seven center cubes are removed

from each. The original cube has now been divided into 729 (9 × 9 × 9) parts containing 400 small solid cubes. As with the Sierpinski carpet, this process can be continued indefinitely. The dual of the cube is the octahedron.

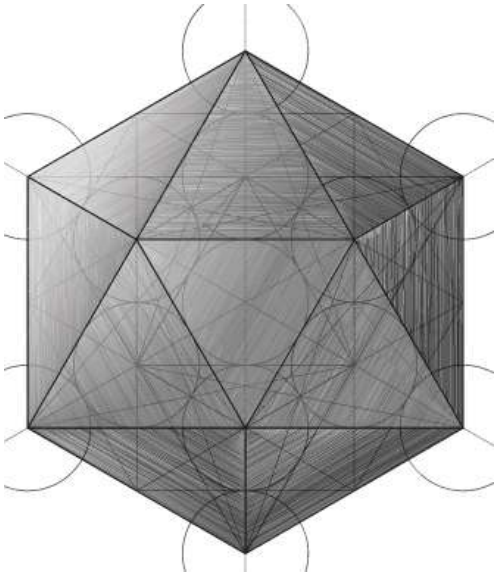


Icosahedron

A regular icosahedron has twenty faces of equilateral triangles, twelve vertices, and thirty edges. This polyhedron represents the element of water. The water element is also linked with emotions and the ability to be mentally flexible. For this reason, the icosahedron is also used to represent the sacral chakra.

The sacral chakra is associated with emotions and creativity. Like water, emotions should be allowed to flow to enable us to be emotionally balanced: holding emotions in can create stagnation, and being too emotional can leave us depleted. Creativity can also go through phases of flowing and being blocked. Sometimes an inability to create can indicate emotions that need to be released.

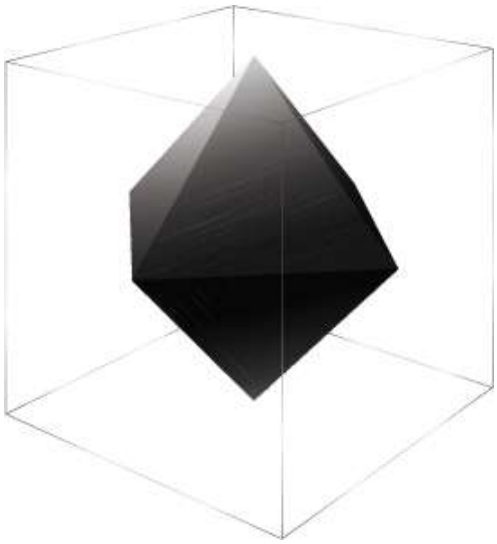
You may find this shape being used as dice in board games. Traditionally cubes have always been utilized to produce a random number from one to six, but using the icosahedron with its twenty faces provides the opportunity for either more integers, or a different ratio of numbers, as twenty is not divisible by six. The dual of the icosahedron is the dodecahedron.



Octahedron

The octahedron has eight triangular faces, six vertices, and twelve edges. It looks like two square-based pyramids connected by their bases. The octahedron represents the element of air. It is also said to represent the heart chakra, although some sources attribute the octahedron to the throat chakra.

The heart chakra is the center of all the chakras, having three chakras above it and three below. A balanced heart chakra allows us to happily give love to others and to receive love in return. It also enables us to self-love—to treat ourselves with care and compassion. Love is just as vital to us as the air that we breathe.



This polyhedron is sometimes used for meditation or reflection, and for considering things from different angles. Fluorite crystals can often be found in the shape of an octahedron, as this mineral cleaves easily into this form. The dual of the octahedron is the cube.

Octahedron Meditation for Blessings and Guidance

- Visualize yourself facing north, inside an octahedron: the top point above your head, the bottom point below your feet, and the four points at the middle positioned at the four compass points.
- Concentrate on the top point above your head and call on the Universe (or God/Goddess/Creator, whichever term resonates most with you) to join you in this meditation.

- Concentrate on the bottom point below your feet and call on Mother/ Planet Earth (whichever term you prefer) to join you in this meditation.
- Concentrate on the north point in front of you, and ask Archangel Uriel to join you in this meditation.
- Concentrate on the east point to your right, and ask Archangel Raphael to join you in this meditation.
- Concentrate on the south point behind you, and ask Archangel Michael to join you in this meditation.
- Concentrate on the west point to your left, and ask Archangel Gabriel to join you in this meditation.
- Ask for blessings and guidance on your spiritual path.
- Be sure to thank everyone you called in to join you before you finish.

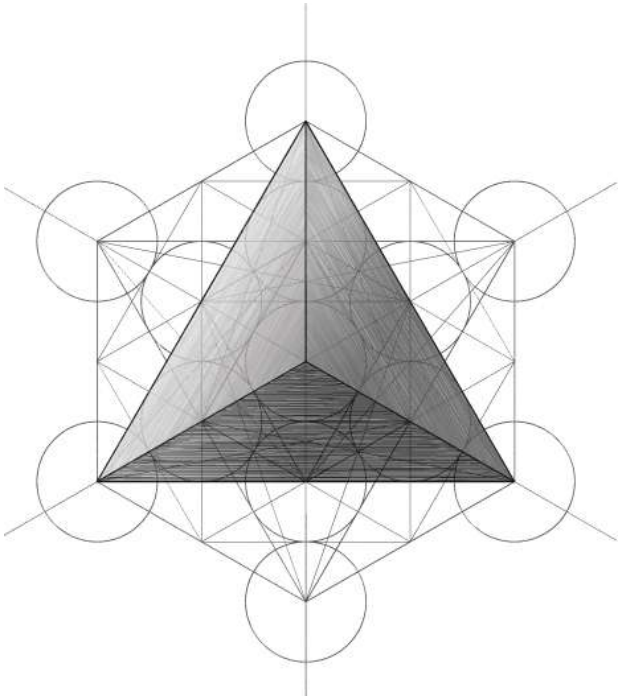
This meditation could be done at the beginning of the day, to receive guidance on situations that occur throughout your daily life, or perhaps before you go to sleep to receive guidance in the form of dreams.

Tetrahedron

The tetrahedron is a pyramid with a triangle-shaped base. It has four faces, four vertices, and six edges. The tetrahedron represents the element of fire, which is also connected with the solar plexus chakra.

The solar plexus chakra is associated with will, action, and determination. Just as the fire transforms fuel into heat, the solar plexus is the center where ideas (fuel) become action (heat).

In Bottrop, Germany, there is a structure with viewing platforms in the shape of a tetrahedron. Standing on top of a hill, on columns that are 29 feet (9 m) high, this structure has sides that are 197 feet (60 m) in length. While in Minnesota, USA, there is a three-dimensional metal artwork of the Sierpinski triangle. As the tetrahedron has three sides, it is the only Platonic solid that is self-dual. The compound dual forms the shape known as a stellated octahedron (see Kepler-Poinsot solids in chapter 4).

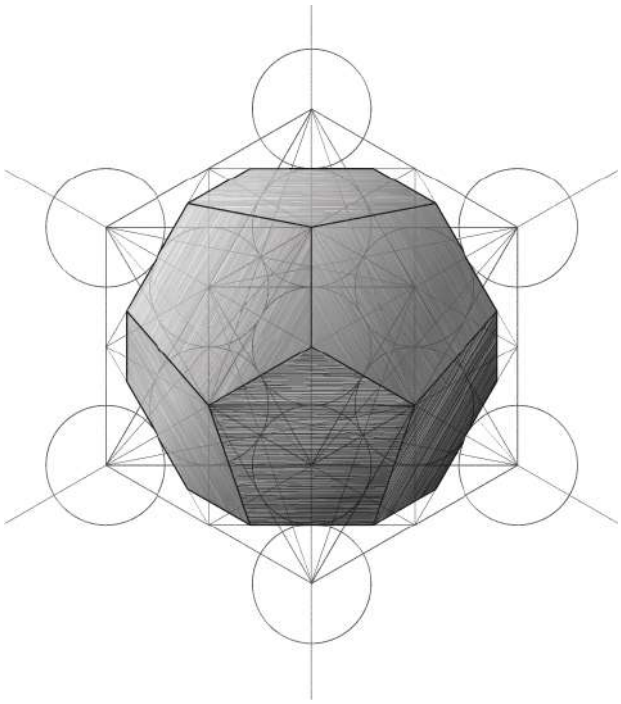


Dodecahedron

The dodecahedron has twelve faces of pentagons, twenty vertices, and thirty edges. This polyhedron represents the element of ether and also the universe. The dodecahedron is also associated with the brow and crown chakras, symbolizing our connection with the universe and the Creator. It has sometimes also been linked with the throat chakra.

The brow chakra is the center of wisdom and knowledge, whereas the crown chakra expands on this knowledge and helps us to realize our connection with everything else in the universe.

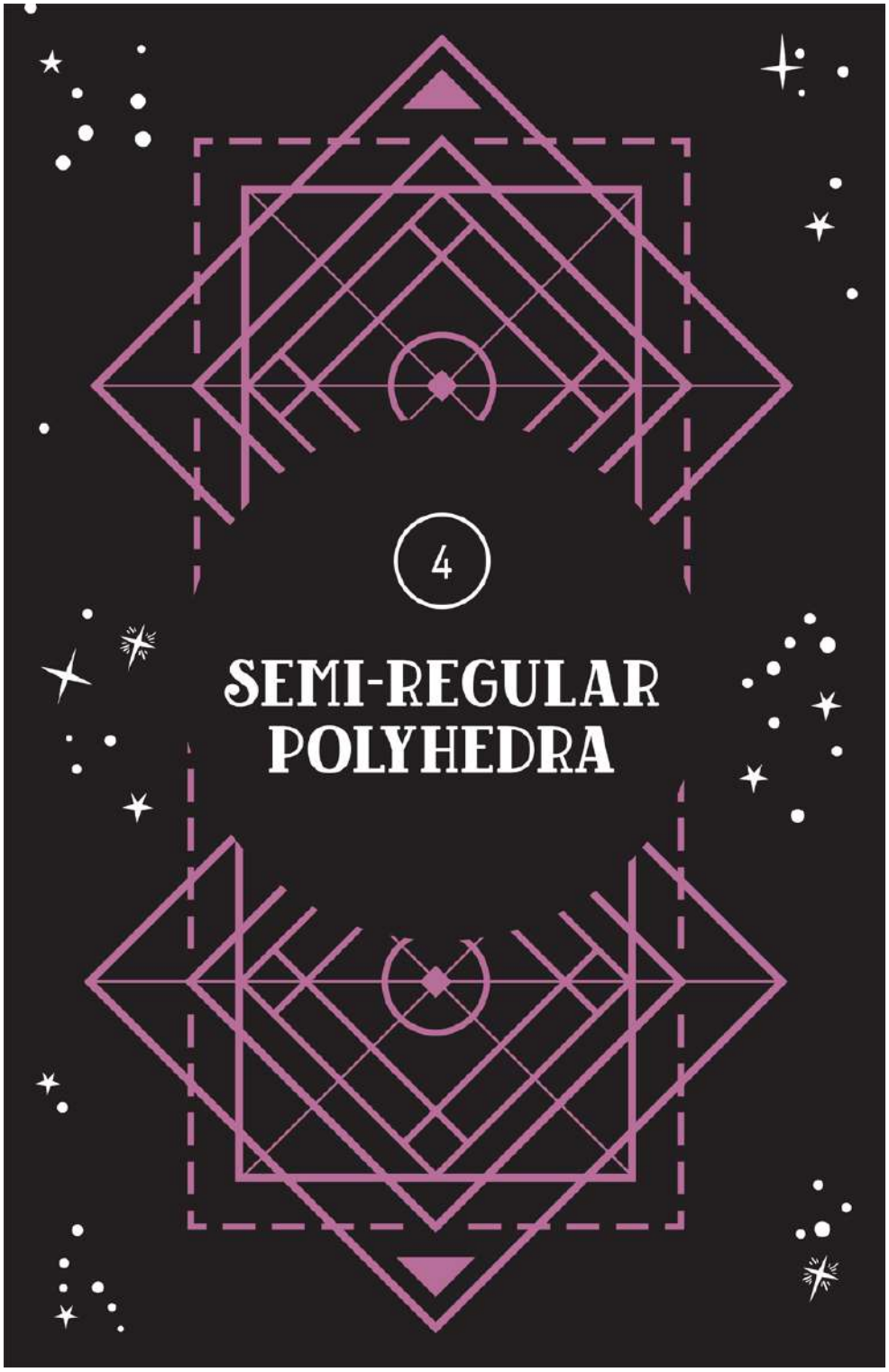
Unlike the other Platonic solids, the dodecahedron does not touch the outer edge of Metatron's cube. The dual of the dodecahedron is the icosahedron.



Summary

Platonic solids and the three-dimensional forms in the last chapter are pleasing to look at due to the symmetry and balance of such shapes. However, a three-dimensional object does not have to be symmetrical to be used in a mind, body, and spirit context: mindfulness can be utilized in any situation. Mindfulness is the activity of clearing your mind of all thoughts and being more observant of your actions. Try touching a range of three-dimensional objects and noticing the difference in texture, whether the object is warm or cold, and so on.

Number of Faces/Shapes	Associated Shapes	Keywords
1	Sphere	Eternity, Creator, One
1	Torus	Flow, movement
1	Cone	Focus or illumination
4	Tetrahedron	Fire, will, determination
6	Cube	Earth, stability
8	Egg of life	Beginnings, early growth
8	Octahedron	Air, infinity, abundance
8	Star tetrahedron	Masculine/feminine balance
12	Dodecahedron	Ether, connection
20	Icosahedron	Water, emotions


4
SEMI-REGULAR
POLYHEDRA

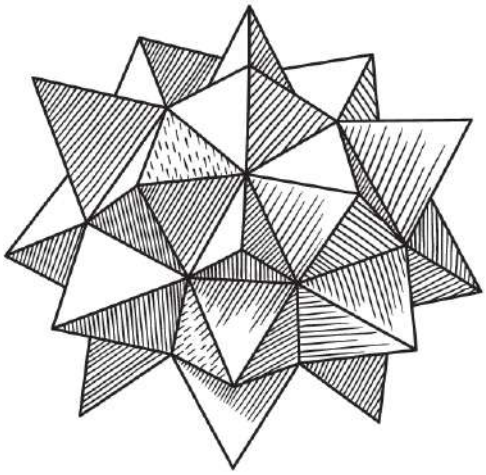
Semi-regular polyhedra, although they contain geometric polygons, are not generally considered as sacred geometry (with the exception of the stellated octahedron), but they are seen frequently in art, both two-dimensionally and three-dimensionally.

Kepler-Poinsot Solids

Stellation means to take a two- or three- dimensional shape and extend its edges until they meet again and create a new shape. Johannes Kepler, a German astrologer, astronomer, and mathematician, studied the Platonic solids in the seventeenth century and discovered that he could create two stellated versions of the dodecahedron by extending the edges of the faces until they met. Kepler's work was rediscovered by Louis Poinsot in the nineteenth century, and Poinsot discovered two more stellated polyhedrons: another dodecahedron and the icosahedron. Although there would be more people after this who contributed to the complete list, the shapes are still known as Kepler-Poinsot solids. In total, three of the Platonic solids can be stellated.

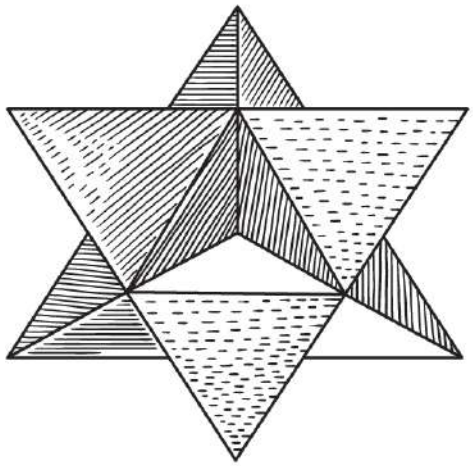
Icosahedron

There are fifty-nine stellations of the icosahedron, ranging from fairly simple examples to the final stellation, which has sixty visible points.



Octahedron

There is only one stellation of the octahedron. A stellated octahedron is also known as a star tetrahedron, a stella octangula, and a Merkaba. This polyhedron is created by placing three triangles on each triangle face (along each edge) of the octahedron so that they meet at the top points. Visually this resembles two intersecting tetrahedrons: one pointing upward and the other pointing downward, essentially at 180° to each other. The Merkaba is considered a sacred shape and means “light, spirit, and body.” It is used as a form of meditation by visualizing the Merkaba surrounding the physical body.

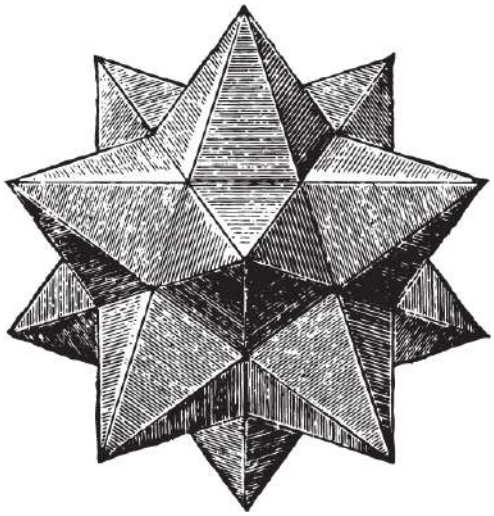


A Merkaba Meditation

- Sit comfortably and close your eyes.
- Visualize the upward-pointing tetrahedron with the tip above your head and the base at your hips.
- Then visualize the downward-pointing tetrahedron with the tip beneath you and the base at your shoulders.
- You are now inside the Merkaba.
- Visualize the top and bottom tetrahedrons starting to spin slowly in different directions. (It does not matter which way each one spins, just whatever feels comfortable for you.)
- When you have finished meditating, slow the Merkaba down to a stop.
- Take some time to become aware of your body; wriggle your toes and feet, and make sure you feel still and secure before opening your eyes.

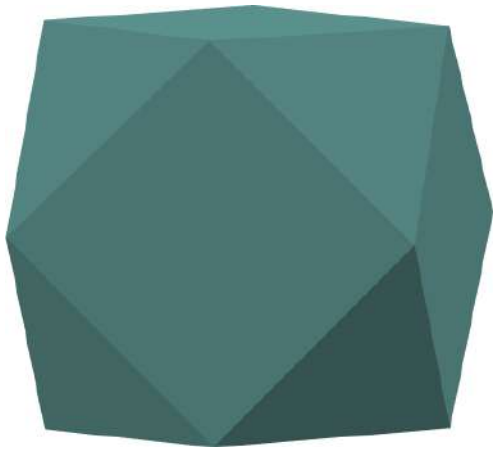
Dodecahedron

From the dodecahedron, three more shapes were created: the small stellated dodecahedron (shown here), the great dodecahedron, and the great stellated dodecahedron. There is a small stellated dodecahedron as part of the floor decoration in the Patriarchal Cathedral Basilica of St. Mark in Venice, Italy, which was designed by Paulo Uccello in the fifteenth century.



Archimedean Solids

Archimedes created thirteen solids, some of which were illustrated in Luca Pacioli's book *Divina Proportione*, but it was not until Kepler rediscovered them in 1620 that these shapes became better known. Although these shapes are created from a mixture of polygons and do not have any particular symbolism attributed to them, they can be viewed as a mixture of one or more Platonic solids. The Archimedean solids follow the same rules as the Platonic solids, because each face of the same shape is identically sized, and each solid must be able to fit inside a sphere. The thirteen Archimedean solids are listed in the following chart.



Name	Faces	Vertices	Edges
Cuboctahedron	6 squares 8 triangles	12	24
Great rhombicosidodecahedron	12 decagons 20 hexagons 30 squares	120	180
Great rhombicuboctahedron	6 octagons 8 hexagons 12 squares	48	72
Icosidodecahedron	12 pentagons 20 triangles	30	60
Small rhombicosidodecahedron	12 pentagons 20 triangles 30 squares	60	120
Small rhombicuboctahedron	8 triangles 18 squares	24	48
Snub cube	6 squares 32 triangles	24	60
Snub dodecahedron	12 pentagons 80 triangles	60	150
Truncated cube	6 octagons 8 triangles	24	36
Truncated dodecahedron	12 decagons 20 triangles	60	90
Truncated icosahedron	12 pentagons 20 hexagons	60	90
Truncated octahedron	6 squares 8 hexagons	24	36
Truncated tetrahedron	4 triangles 4 hexagons	12	18

The truncated polyhedrons are able to fit inside the Platonic solids that they originate from, as well as the dual shape of that solid.

Examples of some of these polyhedrons can be found in various places around the world:

- Cuboctahedrons line the bridge to the Chinese Cultural Center in San Francisco, USA.
- The snub cube appears in a fountain at the California Institute of Technology (Caltech) in Pasadena, USA.
- A truncated icosahedron is sometimes seen as the black-and-white ball in the game of soccer, containing black pentagons and white hexagons.
- The National Library in Minsk, Belarus, is in the shape of a small rhombicuboctahedron.

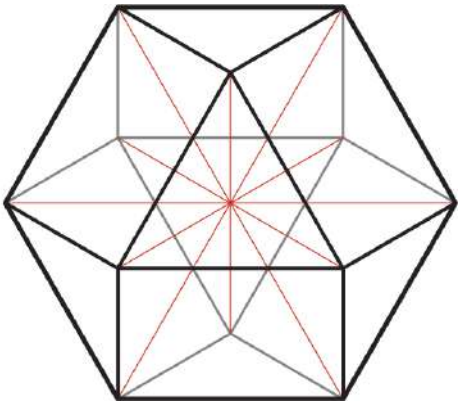
A duo of artists named Hybycozo have created a series of sculptures of geometric shapes, which have been exhibited around the globe. Created from iron and containing laser-cut Islamic artwork, these sculptures are over 6 feet (1.8 m) tall and include a small rhombicosidodecahedron and truncated octahedron, as well as the Platonic solids: cube, icosahedron, and dodecahedron.

Vector Equilibrium

The cuboctahedron is a remarkable polyhedron, as it is the only three-dimensional form that has vectors of equal lengths. This means that not only are all the edges the same length, but also the center point to each vertex is the same length. This was discovered by Buckminster Fuller in 1917, but it was not until 1940 that the cuboctahedron was given the name “vector equilibrium.” Fuller described the shape as being the “zero starting point for happenings or non-happenings.”

Another way to achieve this polyhedron shape is by placing twelve spheres equally around a central sphere (making thirteen in total) and drawing a line from the center of each sphere to the center of the middle sphere. A line is then drawn from the center of each sphere to the center of all spheres immediately adjacent.

There are many more semi-regular shapes, but the more complicated the shape becomes, the less symmetrical it is and the more unlikely the shape is to be found in nature. The Catalan solids, for example, are based on the Archimedean solids but the faces are not formed of regular polygons.



Tip

It is possible to find printable patterns on the internet of the Platonic solids and Archimedean solids. You can simply print them out, fold them according to the instructions, glue the tabs in place, and then you'll have your very own example of a regular or semi-regular polyhedron.

❄ ❄ ❄

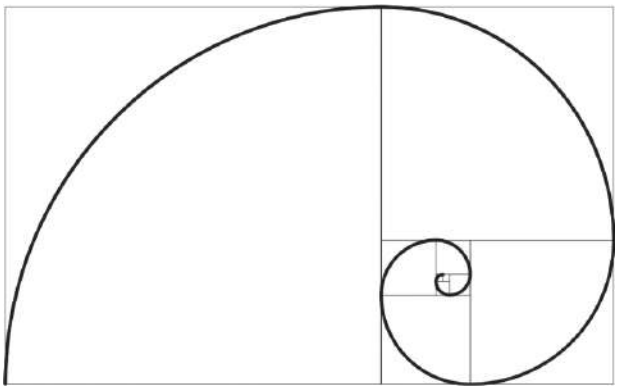
5
SPIRALS

Spirals are often used for religious and general decorative purposes. They are also used to represent the journey of life and the process of working on our repeating life lessons. A spiral with the outer end on the left spirals inward and represents working on our inner life, silence, contraction, and stillness. A spiral with the outer end on the right spirals outward and shows movement, expansion, cycles, and spiritual growth.

The spiral dance is a ritual dance that is usually performed at the pagan festival of Samhain (pronounced *sah-wain)*, which is celebrated on October 31. Dancers link hands and, to the beat of a drum, face to the right (called *deosil)* and are then led by a dancer at the front in a clockwise direction.

Golden Spiral

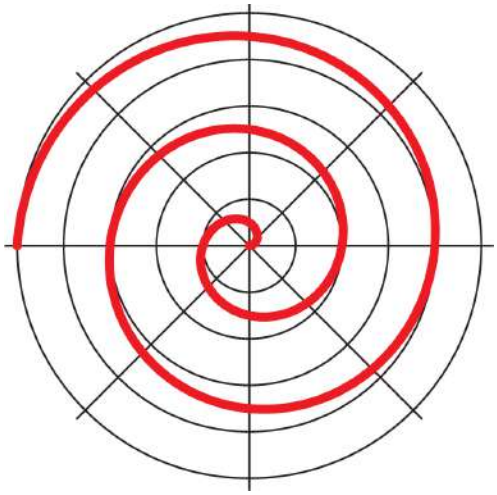
To form the golden spiral, we take the numbers of the Fibonacci sequence (see page 59), starting from the beginning, and use them to form a square. So first, a square of 1 × 1, then another square of 1 × 1 (you can see these two squares at the center of the spiral in the diagram below), so now we have a length of 2. Next a square of 2 × 2 is placed beside the first two squares, giving a length of 3 (2 + 1). A square of 3 × 3 is placed alongside making a length now of 5 (3 + 2), and so on.



Starting with the first two 1 × 1 squares, a curve is then drawn from the corner that touches the previously placed square to the opposite corner. As more squares are placed, the curve becomes a spiral. The distance between each spiral and the previous one is increased by the value of phi (described in chapter 6) for every quarter turn made, meaning the spiral progressively gets wider. The name given to this type of spiral is “logarithmic spiral,” and this is often seen in nature in, for example, in snail shells, nautilus shells, ammonites, and goat horns.

Archimedean Spiral

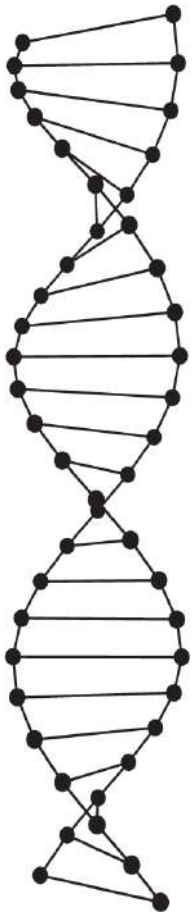
An Archimedean spiral is different from a logarithmic spiral because successive rotations remain at a constant distance from each other as the spiral is drawn. Archimedean spirals can be seen in many places from a coiled spring in a watch to a roll of wallpaper. They were very frequently used in wood carving decoration and can be found in many old buildings such as churches and manors. Spinning an Archimedean spiral appears to make the lines move either in toward the center or outward, depending on which direction the spiral is spun. The equation to plot an Archimedean spiral is $r = a + b\theta$.



Helix

A helix could be described as a three-dimensional corkscrew. Helices can be conical, meaning they come to a point like a screw or corkscrew, or they can be circular, meaning the helix follows the same curvature like a spring or a spiral staircase. A DNA helix contains two circular helices, while a conic helix can be seen in the tendrils that a creeping plant grows. Helices can be right-handed or left-handed. This shape is said to be a symbol of resilience.

The Tao Zhu Yin Yuan tower is a beautiful example of a double helix. Set in Taipei, China, the tower has twenty-one levels and it incorporates trees and other vegetation into the design, aimed at absorbing up to 130 tons of CO_2 emissions each year.



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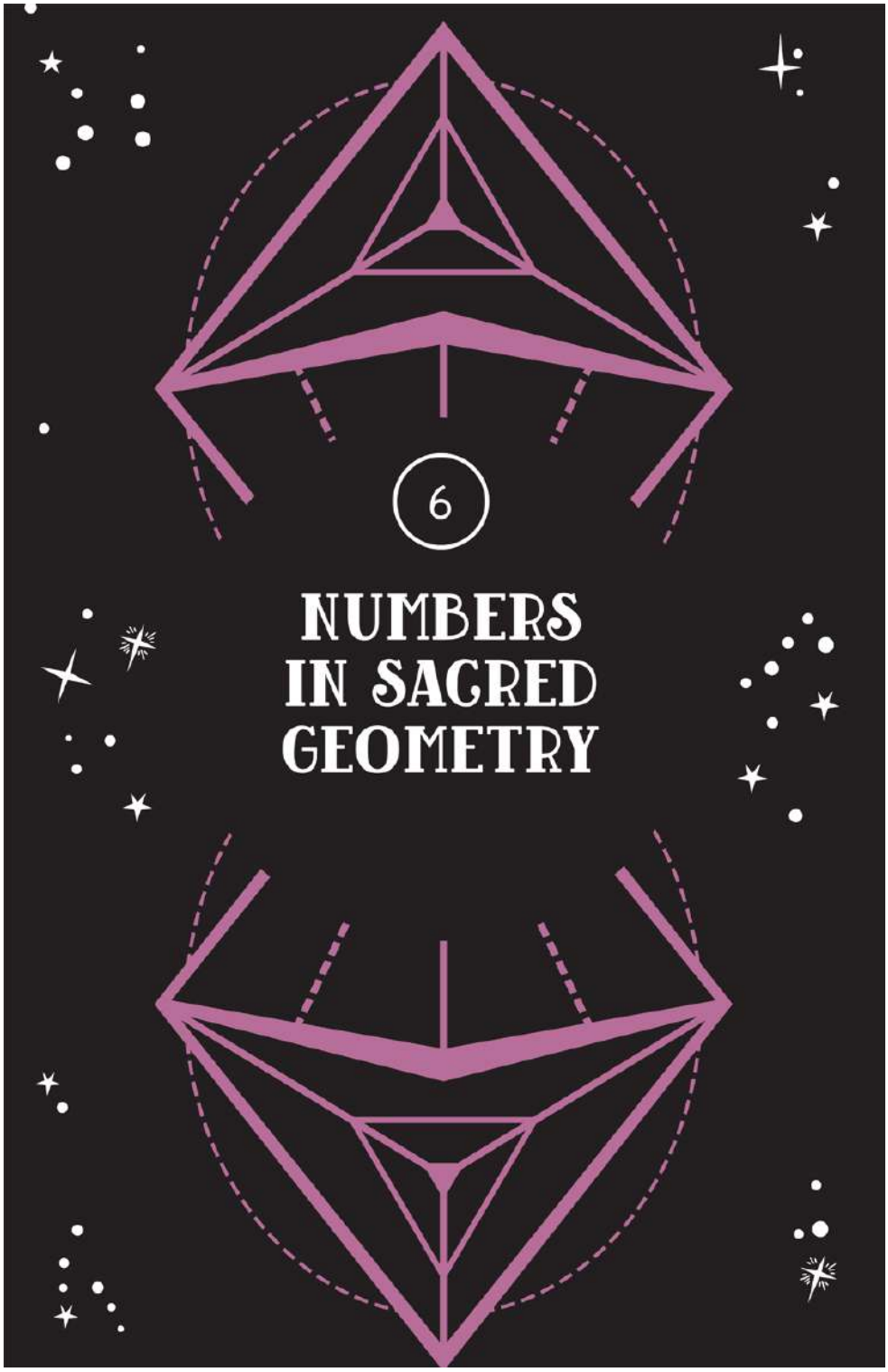

6
NUMBERS
IN SACRED
GEOMETRY

In this chapter we will briefly cover some of the calculations behind a lot of the sacred geometry shapes. We are only scratching the surface of a huge subject, because the numbers and equations in this chapter are the basis of geometry. The ratios below are considered sacred due to the considerable number of places that they are found in nature and ancient civilizations.

Fibonacci Sequence

Fibonacci was an Italian mathematician in the thirteenth century. In his book, *Liber Abaci (The Book of Calculation)*, he introduced the rabbit problem. A pair of newborn rabbits (one male, one female) is placed in a field and after one month, they are able to breed. At the end of the second month, a second pair of rabbits (one male, one female) is born. In the third month, the original breeding pair will produce another pair of rabbits, and the second pair of rabbits is now a month old and able to breed. So, at the beginning of the fourth month, there are now three pairs of rabbits. At the end of the fourth month, the original pair of rabbits produces a pair, their first offspring also produce a pair, and the pair born the previous month is now able to breed—this brings the total number of rabbits in the field to five pairs. Fibonacci made certain assumptions with his rabbit problem:

- A mating pair always produces a new breeding pair (one male, one female) every month from the second month onward.
- Rabbits never die. Using these assumptions, the number sequence is infinite and follows this pattern:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, etc.

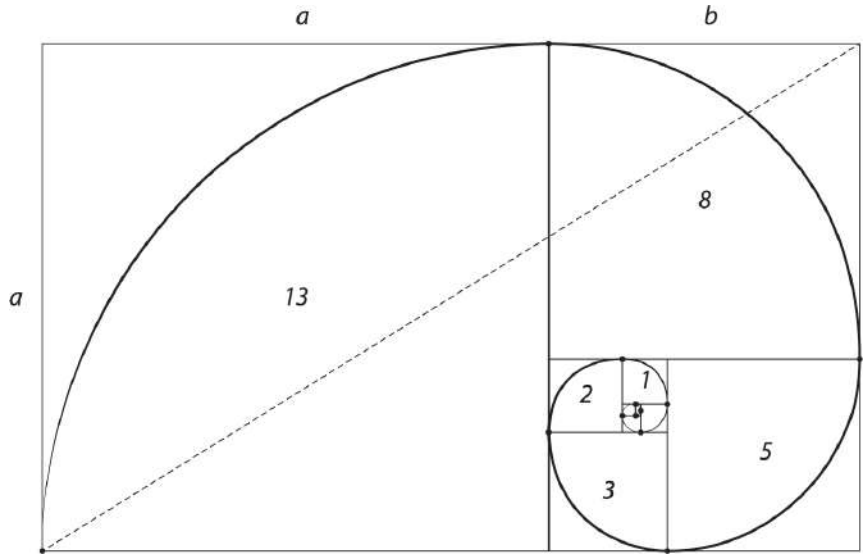
When we study this sequence, we can see that the next number in the sequence is the sum of the two numbers before it: one plus one is two, then two plus one equals three, then three plus two is five, and so on. The numbers in the Fibonacci sequence lead us to the phi ratio.

Phi/Golden Ratio

Phi, also referred to as the golden ratio, is an irrational number, meaning that it cannot be written as a fraction (phi cannot be formed by dividing a whole number by another whole number). Irrational numbers are also infinite.

Phi is calculated by the formula $(1 + \sqrt{5}) \div 2$. This gives us the answer 1.618033988749895 … We can also take a number from the Fibonacci sequence and divide it by the previous number in the sequence to approach phi; the greater the value of the numbers used the closer to phi we can get. For example, $89 \div 55 =$ 1.6181818181818 (four correct digits), whereas $610 \div 377 =$ 1.61803371352785 (six correct digits). The reason that phi is known as the golden ratio can be seen in the golden rectangle below.

The ratio of the length of the larger rectangle to the length of the smaller rectangle can be written as *a:b*. The answer to this formula is equal to the ratio of the length of both rectangles added together to the length of the larger rectangle, which can be written as (a + b):a. For example, if we again take the numbers eighty-nine and fifty-five from the Fibonacci sequence, where $a = 89$ and $b = 55$:



a:*b* is 89 ÷ 55 = 1.6181818181818

(*a* + *b*):*a* is (89 ÷ 55) ÷ 89 = 1.6179775280898

Again, the greater the value of the number used, the closer the answer will be to phi.

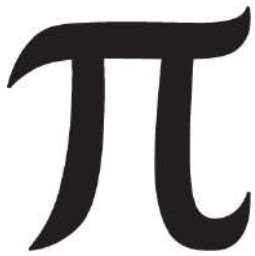
The golden ratio is used to form the golden triangle and the golden spiral, as well as the lute of Pythagoras (see Pentagram in chapter1), where two consecutive pentagrams display the ratio of phi.

The golden ratio is also known as the Divine Proportion due to the belief that the Creator must be responsible for this calculation, not just because of the amount of times the ratio can be found in nature, but also due to the multiple occurrences that the irrational number (or something very close to it) appears in geometric calculations. All religions attribute creation with a Divine Creator or Creators, and the golden ratio epitomized the perfection of this creation: phi is apparent in body measurements in humans (facial proportions), birds (body and wings), snails (logarithmic shells), planets and space, and plant growth, to name a few. The mathematicians who studied phi discovered various geometric shapes: the golden rectangle, the golden triangle, the golden spiral, the lute of Pythagoras, the golden rhombus, and other shapes.

The golden ratio was also used in sculptures, as some human proportions are based on phi, and in other art, because the ratio produced results that were pleasing to look at. This further strengthened the belief that such a harmonious number could not exist by chance.

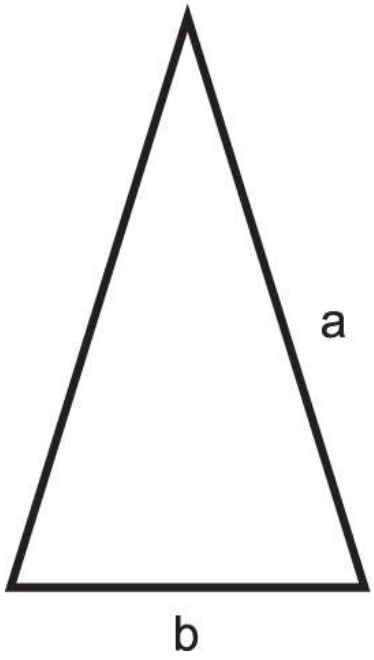
Pi

Pi, like phi, is also an irrational number: 3.1415926535897 … It is used to calculate the circumference (outside) of a circle by multiplying the diameter (one side of the circle to the other) by pi, or vice versa, by measuring the circumference and dividing it by pi to find the diameter. The more digits of pi that are used in the calculation, the more accurate the answer.



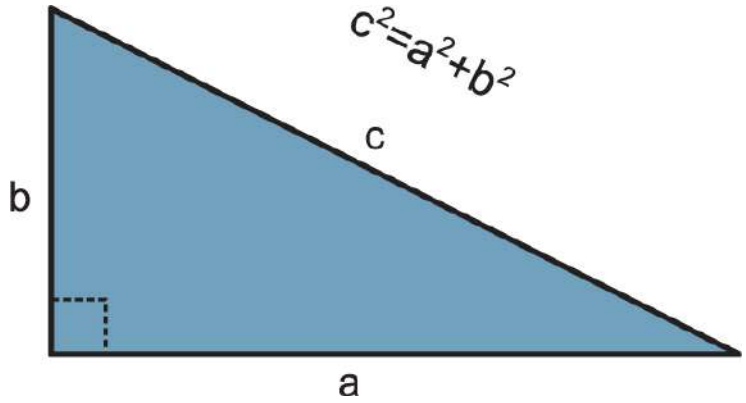
Golden Triangle

This polygon is an isosceles triangle (having two sides of equal length) and is called the golden triangle, as the ratio of its edges is: $a \div b = \phi$. The interior angles are 72°, 72°, and 36°. Examples of this type of triangle can be found in a pentagram, both on the individual triangles around the pentagram, and from the bottom two points to the top point. The golden triangle can also be used to form a logarithmic spiral.



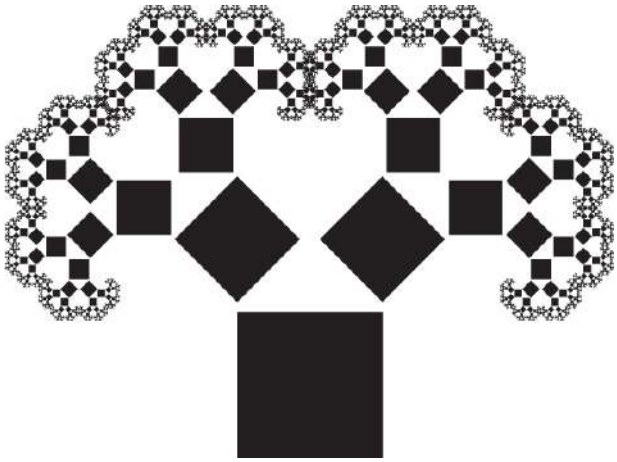
Pythagorean Triangle

A Pythagorean triangle, sometimes called an Egyptian triangle, is a right-angled triangle with the ratio of $a^2 + b^2 = C^2$. It is also sometimes known as a 3:4:5 triangle due to the fact that the formula works if $a = 3$, $b = 4$, and $c = 5$ ($3 \times 3 = 9$, $4 \times 4 = 16$, and $5 \times 5 = 25$; therefore, $9 + 16 = 25$).



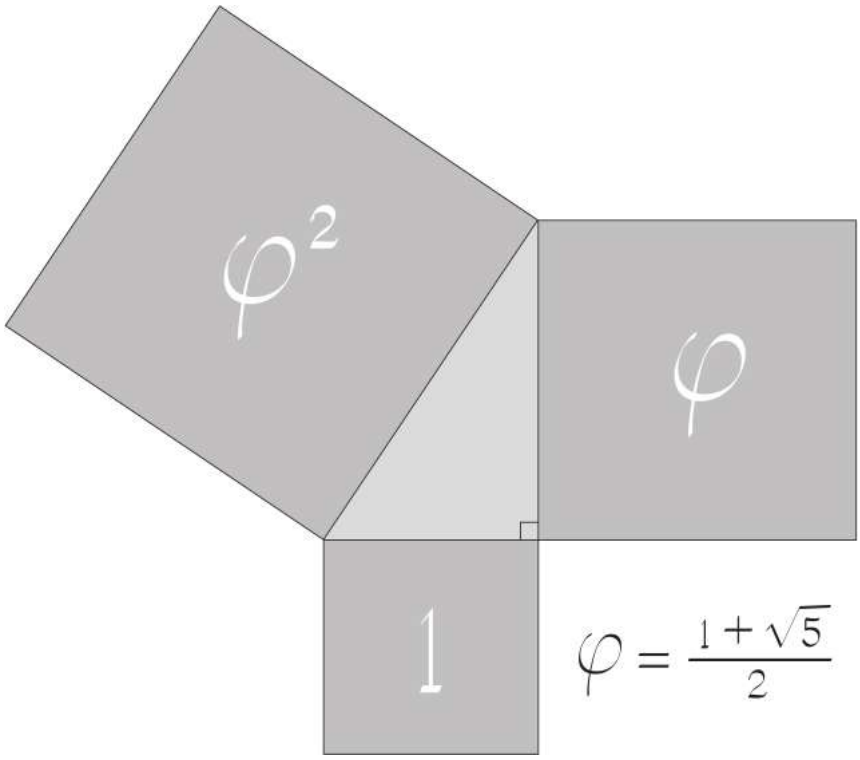
Pythagorean Tree Fractal

The Pythagorean triangle, including the squares, can be used to create a lovely treelike picture: the largest square is placed at the bottom to resemble the trunk, and additional Pythagorean triangles are drawn on the two upper triangles. This pattern is continued for as long as desired. Using an equilateral triangle surrounded by squares gives a more symmetrical tree pattern. Both methods are examples of the nature of plant and tree growth.



Kepler Triangle

Kepler discovered that a right-angled triangle can be formed with Phi ratios: if the base is 1, and the height is the square root of phi, then the slope is equal to phi. So the golden triangle's equation of 1:√ϕ:ϕ gives us the approximate measurements of 1:1.272:1.618.



Golden Pyramid

The Great Pyramid of Giza in Egypt is one of the Seven Wonders of the World, and it has been studied extensively. This pyramid was originally 280 Egyptian royal cubits high (480.91 ft/146.58 m) with a base average length of 440 Egyptian royal cubits (755.71 ft/230.34 m), and a slope of 51°. By taking the height of 280 cubits and dividing that by the length of 440 cubits, we get the answer 0.63636. If we go back to the Kepler triangle and place another triangle beside it to create a two-dimensional pyramid, divide the height of 1.272 by the base length of 2 and we again get the result of 0.636, showing that the Great Pyramid has the same ratio of height to base as Kepler's triangle.

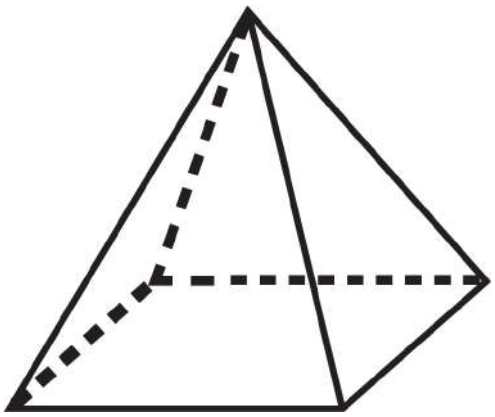
Create Your Own Golden Pyramid

To experience the energy of the golden pyramid, you can create a meditation pyramid that you can sit or lie within. This can be done with some bamboo garden canes and some reusable adhesive putty (the blue stuff you can use to hang pictures on the wall).

- Create a square on the ground with four equal-size canes.
- To calculate the length of the four upright slant edge canes that join at the top central point, we use the dimensions of the Kepler triangle.
- To get the Kepler triangle, we first have to work out the diagonal length of the pyramid base square by taking the length of the side and multiplying this figure by the square root of 2 (the square root of 2 is 1.414). For example: a base square side length of 2 yards multiplied

by 1.414 = a diagonal length of 2.828 yards. (Meters can be substituted for yards throughout these instructions.)

- This figure is then halved to give us the measurement from the corner to the center of the base square, which is the base of the Kepler triangle.
- We know that the hypotenuse (slant) of the Kepler triangle is a ratio of 1.618 to the base length. So we take the halved diagonal number and multiply by 1.618 to arrive at the slant edge length. For example: the diagonal length of 2.828 yards is halved to arrive at the figure of 1.414, which is then multiplied by 1.618 to get the length of the slant edge of 2.288 yards for a pyramid with base cane lengths of 2 yards.
- Create four equal canes of the required length and place one end at each corner of the base square and connect these four canes at the top to form the point of the golden pyramid.



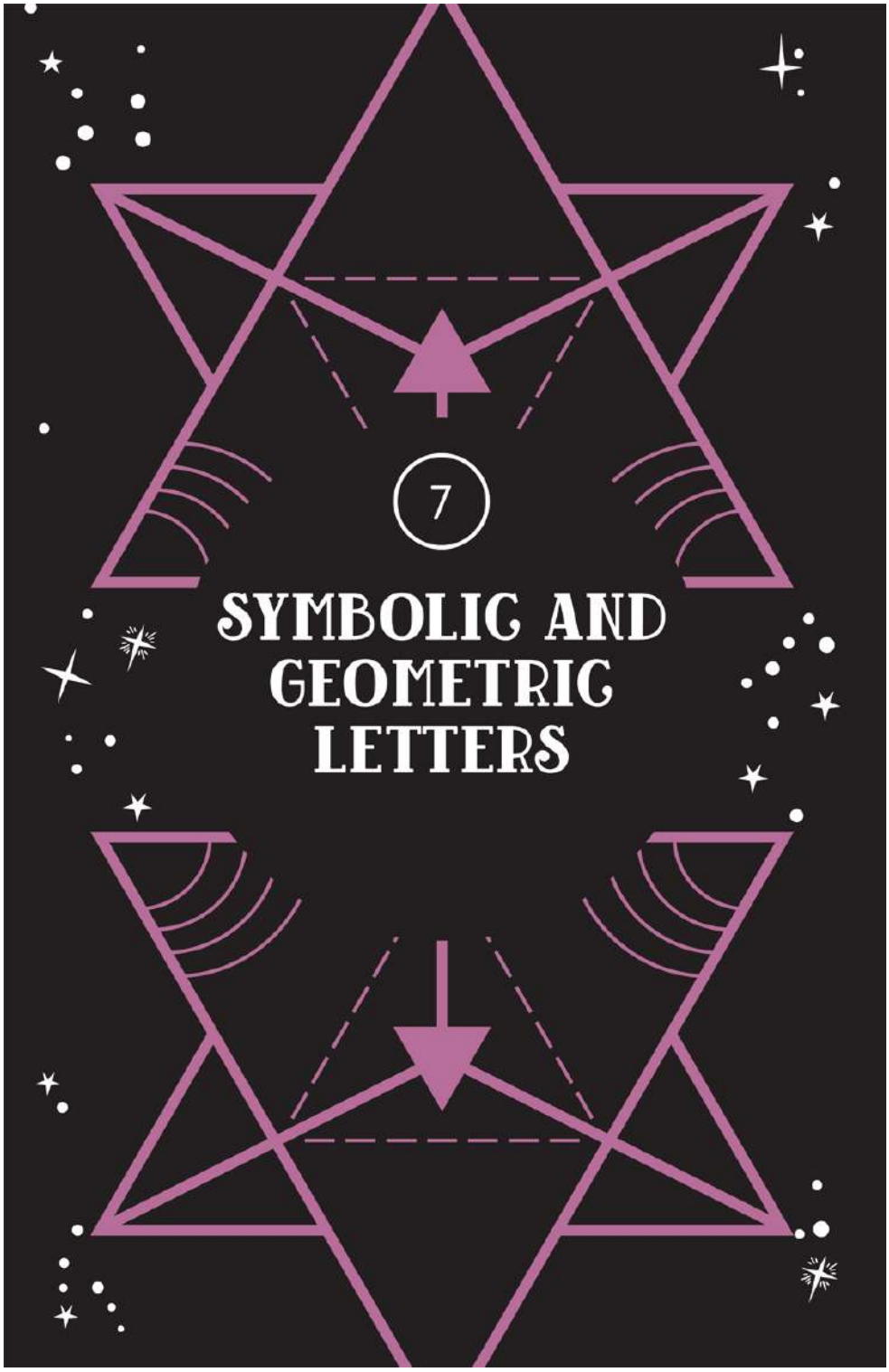
Length of Base Canes	Length of Diagonal (Halved)	Length of Slant Edge Canes
1 yard (meter)	1.414 (0.707)	1.144 yards (meters)
1.5 yards (meters)	2.121 (1.061)	1.717 yard (meters)
2 yard (meters)	2.828 (1.414)	2.288 yards (meters)

You can also create a small version of the golden pyramid to place over items, like crystals or food, using the same calculations:

Length of base side × 1.414 (square root of 2) = base diagonal
Base diagonal — 2 = base of Kepler triangle
Base of Kepler triangle × 1.618 = length of slant edge

Many pyramid-shaped buildings have square bases, including ancient Mayan and Aztec temples, and modern-day examples such as the Louvre in Paris, France; the Walter Pyramid monument in Long Beach, California; and the Nima Sand Museum in Oda, Japan.

There are other pyramids in Egypt, but the Great Pyramid with its golden ratio is considered to have interesting properties and has been used as a template to create small pyramids for meditating with. Pyramids, like domes, are said to focus energy upward toward the point. It has even been said that any food stored under a golden pyramid will keep fresh for longer than normally expected.


7
SYMBOLIC AND GEOMETRIC LETTERS

The letters of the alphabet form the basis of all written words. The word *alphabet* stems from the first two Greek letters, *alpha* and *beta*, but not all alphabets follow the same format; although many alphabets are made up of letters, some are a list of sounds or syllables.

At first glance, letters—especially those in the Latin alphabet that English-speaking countries use today—may not appear to be geometric, but they have changed a lot from early times. Historically, there were many regional differences in lettering, and some of these went on to evolve into other forms, resulting in the alphabets we see today. Lettering started with simple lines, and a meaning was attributed to each line. Some meanings were basic, such as an object or a sound, whereas some letters had great symbolic meaning. This chapter looks at some alphabets that are more geometric, and some that are more symbolic.

Greek Alphabet

The Greek alphabet is said to have become standard around 400 BCE, and before this time there were variations in the alphabet from region to region. Throughout ancient times, Greek mathematicians and physicists were involved in a lot of the mathematical discoveries. Even now, Greek letters are frequently used in physics and mathematical equations as well as in many other fields of study. Most of the letters, however, have a symbolic meaning as well. Some sources suggest that Greek letters are used in divination, but this appears to be a modern use for the symbols.

Symbol	Name	Practical Use	Symbolic Use
A α	Alpha	Alpha decay, angular acceleration	First or most significant. God is described in the New Testament as “the alpha and omega,” meaning first and last.
B β	Beta	Beta radiation	Duality
Γ γ	Gamma	Gamma radiation, gamma motor neuron	Birth
Δ δ	Delta	Changeable quantity in math equation	God, ten, trajectory
E ε	Epsilon	Tilt of a planet’s axis	Justice
Z ζ	Zeta	Nuclear charge on an electron	Life. the god Zeus
H η	Eta	Seventh brightest star in a constellation	The goddess Hera
Θ θ	Theta	A plane angle in geometry, an unknown variable in trigonometry	Death
I ι	Iota	Not used in equations due to its similarity to the number one.	A jot (miniscule amount), divine power
K κ	Kappa	The curvature of a curve	Core
Λ λ	Lambda	Subatomic particle	Loosen, liberate
M μ	Mu	The Möbius function in number theory	Meta, the middle
N ν	Nu	A neutrino in particle physics	Prevailing point, converging
Ξ Ç	Xi	Cascade particles in particle physics	Detached, apart from
O o	Omicron	Not used in equations due to its similarity to the number 0	Heaven, circle, entity
Π π	Pi	Irrational number 3.14159-. used to calculate a circle’s	Fire. the god Mars

		circumference from its diameter	
P ρ	Rho	Density in physics	Chi and rho together form chi rho, which represents Jesus Christ
Σ ς/σ	Sigma	Summation operator in mathematics	Synchronized
T τ	Tau	A circle constant equal to 2π (6.28318…)	Life or resurrection, Saint Anthony's cross
Y υ	Upsilon	Upsilon particle	Pythagoras used upsilon to represent a path of virtue or vice.
Φ φ	Phi	Golden ratio 1.618 …	Known as God's fingerprint or the signature of God due to the ratio frequently being found in nature and mathematics
X χ	Chi	Mathematics equations	In Plato's book *Timaes*, chi was described as the two bands of the world's soul crossing over each other.
Ψ ψ	Psi	Wave function in quantum mechanics	An abbreviation for the book of Psalms, also connected with Holy Spirit
Ω ω	Omega	Ohm—unit of electrical resistance	The end of all things. In the New Testament, God is described as "the first and the last."

One suggested way of meditating with the Greek alphabet is to sit comfortably and close your eyes. Mentally name each letter of the alphabet while visualizing the symbol glowing in front of you. Don't worry if you lose your place or get distracted, just relax and start again from the beginning. The idea is to clear your mind of all chatter and just concentrate on naming and forming the letters.

Elder Futhark Runes

The Elder Futhark runic system is believed to have been in use from around the second century to the eighth century CE. The meanings were deciphered at a later date, so the deeper symbolism behind certain runes has been lost. The shapes of all these sigils (symbols believed to have magical powers) can be formed in the flower of life.

Sigil	Name	Meaning	Symbolism
ᚠ	Fehu	Cattle, the god Frey	Power and wealth
ᚢ	Uruz	Aurochs (wild oxen)	Strength of will, untamed potential
ᚦ	Purisaz/ Thurisaz	Giant, the god Thor	Danger or protection
ᚨ	Ansuz	The god Odin	Prosperity, vitality, stability
ᚱ	Raidho	Ride, wheel	Focus, movement, work, growth
ᚲ	Kenaz	Torch	Understanding, learning, inspiration
ᚷ	Gebo	Gift	Generosity, giving and receiving
ᚹ	Wunjo	Joy	Joy, well-being, good news
ᚺ	Hagalaz	Hail	Destruction, chaos
ᚾ	Naudhiz	Need	Need, unfulfilled desire
ᛁ	Isaz/Isa	Ice	Waiting
ᛃ	Jera	Year	Harvest, reward
ᛇ	Eihwaz	Yew	Strength, stability, endings and beginnings
ᛈ	Perhdro/ Pertho	Dice cup	Chance, problem solving
ᛉ	Elhaz/ Algiz	Elk or shield	Restraint, protection from enemies
ᛊ	Sowilo/ Sowulo	Sun	Success, solace
ᛏ	Tiwaz	The god Tyr	Victory, honor, success
ᛒ	Berkanan/ Berkana	Birch	Fertility, growth, sustenance, beginnings
ᛖ	Ehwaz	Horse	Trust, faith, companionship
ᛗ	Mannaz	Man (human)	Potential, support
ᛚ	Laguz	Water, lake	Formlessness, potentiality, the unknown
ᛜ	Ingwaz/ Inguz	The god Yngvi	Fertility, beginnings, potential
ᛟ	Othalan/ Othala	Inheritance, home	Inheritance, heritage, tradition, nobility
ᛞ	Dagaz	Day	Hope, happiness

These runes are used today, carved on wood or painted onto stones, for the purpose of divination. While thinking of a question, the reader picks a rune from a bag, and this rune gives guidance on the outcome of the question. Or there is another method: the reader takes nine runes from the bag while thinking of the question and then casts them into a circle. The runes at the center are immediately relevant, while the ones toward the outside of the circle may be relevant to future events.

You can easily create your own rune set for meditating with by drawing each rune on a small piece of paper or card.

- Close your eyes and pick one of the runes.
- Open your eyes and spend some time examining the rune while mentally repeating the keywords symbolized by the rune.
- Close your eyes while holding the rune between your hands.
- Ask permission to connect with the rune.
- Ask the rune how it can help you at this moment in time.
- Remain open to receiving an answer—it may come as words, a picture, or a feeling.
- When you have finished meditating, thank the rune and open your eyes when ready.

If you don’t get anything during the meditation, don’t feel disappointed; you may receive guidance or inspiration at a later time or date, through synchronicity or dreams.

Ogham

The Ogham originated in Ireland, between the third century and the sixth century. Each letter is known as ogham, while the whole alphabet is called Beith-luis-nin, after the first three letters. These symbols were often drawn on stone as a memorial or monument. Oghams were drawn from the base upward, starting with an upside-down V, and the end of the inscription was denoted with an upright V.

Lines to the right of the vertical line:

Symbol	Letter	Name	Meaning
ᚁ	B	Beith	Birch
ᚂ	L	Luis	Rowan
ᚃ	V/F	Fer	Fern
ᚄ	S	Sail	Willow
ᚅ	N	Níon	Ash

Lines to the left of the vertical line:

Symbol	Letter	Name	Meaning
ᚆ	H	Uath	Whitethorn
ᚇ	D	Dair	Oak
ᚈ	T	Tinne	Holly, elder
ᚉ	C	Coll	Hazel
ᚊ	K	Ceirt	Apple tree

Lines that diagonally cross the vertical line:

Symbol	Letter	Name	Meaning
ᚋ	M	Muin	Vine
ᚌ	G	Gort	Ivy
ᚍ	Ng	Getal	Broom
ᚎ	Z	Straif	Blackthorn
ᚏ	R	Ruis	Elder

Lines that horizontally cross the vertical line:

Symbol	Letter	Name	Meaning
ᚐ	A	Ailm	Pine tree
ᚑ	O	Onn	Furze
ᚒ	U	Lr	Heath
ᚓ	E	Eadhadh	Aspen
ᚔ	I	Iodhadh	Yew

At a later date, more symbols were added to create more letters:

Symbol	Letter	Name	Meaning
ᚕ	X/ea	Éabhadh	Aspen
ᚖ	Oi	Óir	Spindie tree
ᚗ	Ui	Uilleann	Honeysuckle
ᚘ	Ia	Iphin	Gooseberry
ᚙ	Ae	Eamhancholl	Twin of hazel
ᚚ	P	Peith	Birch

The Ogham letters have also been written from left to right in certain manuscripts. Examples of Ogham stones can be found at many sites in Ireland, and there are Ogham transliterations online for anyone who fancies seeing what their name looks like written in this alphabet.

An Ogham Meditation

Collect fallen sticks from some of the trees listed in the Ogham alphabet. You may want to look after a storm or strong winds, as there will be more choice. (Please be respectful and do not cut branches from the trees.) Use a marker or pen to write the Ogham directly onto the stick so that you can identify it when you get home.

For the meditation:

- Sit with a notepad and pen somewhere quiet, where you won't be disturbed.
- Pick up your first stick and note which one you have.
- Close your eyes and ask permission to connect with the Ogham.
- Either write notes as they come to you or continue to meditate for five minutes before thanking the Ogham and placing it to one side.
- Do the same for each of the sticks that you collected.
- If you plan on working with the Ogham again, make sure the sticks are completely dry before storing, or they may go moldy.

Hebrew Alphabet

The Hebrew language is found in the Bible and words are written from right to left. The Hebrew alphabet, called “alefbeit” after the first two letters, has a lot of religious symbolism.

Letter	Name	Symbolism
א	Aleph/Alef	The Creator. The diagonal line, called Vav, both separates and connects the higher world and the lower world.
ב	Beth/Beit	The story of creation, the beginning of duality. Also represents opposites.
ג	Gimel	Balancing and linking the energies of Aleph and Beth. Represents giving and receiving.
ד	Dalled	Meaning door or gate. Connected with selflessness and humility.
ה	Hey	Represents the divine energy present in all of creation. Also, the breath of God.
ו	Vav	Symbolizes unity. Vav is the connection between heaven and earth, equating to the harmony of number six. Also corresponds to the six days of creation.
ז	Zayn	Corresponds to the day of rest, as with the seventh day of creation. Symbolizes spirit and sustenance. Also depicts the struggle for sustenance.
ח	Heth	Heth epitomizes the soul and spiritual enlightenment. Just as the number eight represents new beginnings, this letter symbolizes raising consciousness.
ט	Teth	The ninth letter of the alphabet is connected with femininity and fertility, reflected in the nine-month gestation period. Kindness and mercy.
י	Yod	Just as the number ten was seen as the perfect number and was connected with the Creator, so the tenth letter of the alphabet represents God. It also represents foundations.
כ	Kaf	This letter represents a cupped hand. Kaf is connected with receiving and manifesting. It also embodies humility.
ל	Lammed	Learning, both spiritually and from life events. Also represents movement and change.
מ	Mem	Waters of wisdom and knowledge. Water is connected with emotions and Mem teaches balance. Although Mem is the thirteenth letter of the alphabet, it is connected with the number forty and exemplifies a period of waiting for fruition.
נ	Nun	Nun is equated with the soul and is a symbol of faithfulness and emergence. The shape of this letter teaches humility, as it is bent

		above and below.
ס	Samek	This letter covers giving and receiving support and protection. It also teaches selflessness and thinking for the good of the whole.
ע	Ayin	Vision, with regard to both future planning and moving beyond limitations.
פ	Peh	Speech and the power of words. Peh serves as guidance to choose our words carefully.
צ	Tsadde	Tsadde is a reminder to be righteous, just, and fair.
ק	Kof	Kof symbolizes being one's true self, and not putting on a mask. This letter is connected with evolution and growth through change.
ר	Resh	This letter symbolizes growth and expansion, and also leadership.
ש	Shin/Sin	Shin represents the three pillars of the tree of life and the balance of these pillars.
ת	Tav	The twenty-second and last latter of the alphabet, Tav symbolizes truth, perfection, and completion.

The Tree of Life

The tree of life, known as the Kabbalah, is a lifetime's study that supposedly leads to an understanding of God's purpose for humanity and for the world. It is amazingly complex, with ten sephirot on the tree to consider, along with the many pathways between the sephirot. In ancient Hebrew, *sephirot* is the plural of *sephira*, which means "sphere," but also "emanation."

If you decide to do a Kabbalistic meditation, I suggest you take just one sephira from the tree of life and meditate on that for the time being. Binah is typical and it is a nice one to work with.

BINAH—UNDERSTANDING

After the infinite flash of creation, ignorance was brought into understanding to give humanity a grasp of its breadth and depth. Binah is a feminine energy that gives birth to emotions, reason, and understanding, and it brings a return to God.

MEDITATION ONE

- Sit comfortably somewhere peaceful and close your eyes.
- Breathe in and out in a regular manner and focus on your breath for a while until you relax.

- Consider the creation of the vastness of the universe and all that is in it.
- Imagine the galaxies of stars and all the potential planets that surround them.
- After you have done this for a while, come back, open your eyes, and go about your daily life.

Tip

You can record the meditations on your smartphone and play them back to them when you want to do the meditations.

MEDITATION TWO

- Sit comfortably somewhere peaceful and close your eyes.
- Breathe in and out in a regular manner and focus on your breath for a while until you relax.
- Now imagine the gentleness of femininity and the way it might influence the people around you and the way this energy might improve your life.
- Imagine yourself getting your own emotions under control and thinking more clearly.
- Now visualize the angels taking you in their arms and helping you to understand your spiritual purpose
- After you have done this for a while, come back, open your eyes, and go about your daily life.

Glagolitic Alphabet

The Glagolitic alphabet is believed to have been created by Saint Cyril and Saint Methodius, two Byzantine monks who lived in the ninth century. This alphabet was based upon Slavic dialects. Although this alphabet fell out of use in some areas after Saint Cyril and Saint Methodius died, it still continued to be used in the Orthodox Church and was referred to as Church Slavonic.

Symbol	Name	Meaning
ⰰ	Az	I
ⰱ	Buky	Letters
ⰲ	Vedi	To know
ⰳ	Glagoli	To do/to speak
ⰴ	Dobro	Kindness/good
ⰵ	Jest	Is/exists
ⰶ	Zhivete	Life/live
ⰷ	Dzelo	Very
ⰸ	Zemlija	Earth/ground/soil
ⰹ or ⰼ	I	And
ⰺ	Izhe	Which is/the
ⰻ	Djervb	Tree/wood
ⰼ	Kako	How/as
ⰽ	Ljudi	People
ⰾ	Mislete	Thought/think
ⰿ	Nash	Ours
ⱀ	On	He
ⱁ	Pokoj	Calmness/peace
ⱂ	Rtsi	Speak/pronounce
ⱃ	Slovo	Word/speech
ⱄ	Tverdo	Solid/hard/surely
ⱅ	Uk	Knowledgeable/enlightened
ⱆ	Fert	
ⱇ	Kher	
ⱈ	Oht/Omega	From
ⱉ	Shcha	
ⱊ	Tsi	

ѵ	Cherv	Worm
ш	Sha	Silence/quiet
ъ	Yer	
ь	Yer’	
ѣ	Yat	
ѳ	Unknown	
ѷ	Yu	
є	Small yus	
ѩ	Small iotated yus	
ѭ	Big yus	
ѫ	Big iotated yus	
ѳ	Fita	
ѕ	Izhitsa	

A Meditation

Christian meditations are usually based around reflecting on passages from the Bible. This can be done with any piece of spiritual writing or even an inspirational quote. Sit quietly with no other distractions and think about what the text means to you—for example, how you are embodying this in your daily life, or what beliefs and ideas you need to release in order to align with the meaning of the writing. It may be that you do not agree with the words and you may like to ponder why you feel that way, rather than simply dismissing it, or even think about why the person who wrote the text may feel that way.

There are still ancient writing systems that have not yet been deciphered. Linear A and Linear B are two examples. In the year 1900, the archaeologist Sir Arthur Evans discovered some clay tablets with symbols on them. After much work, the tablets were believed to express two languages: Linear B, dating from around 1500–1200 BCE, which was very similar to the Cypriot script; and Linear A, which is thought to have been in use between 1800 and 1450 BCE. Although progress has been made in interpreting the syllables and meanings behind a lot of the sigils in Linear B, the meaning or purpose of Linear A is still elusive.

⁂ ⁂ ⁂

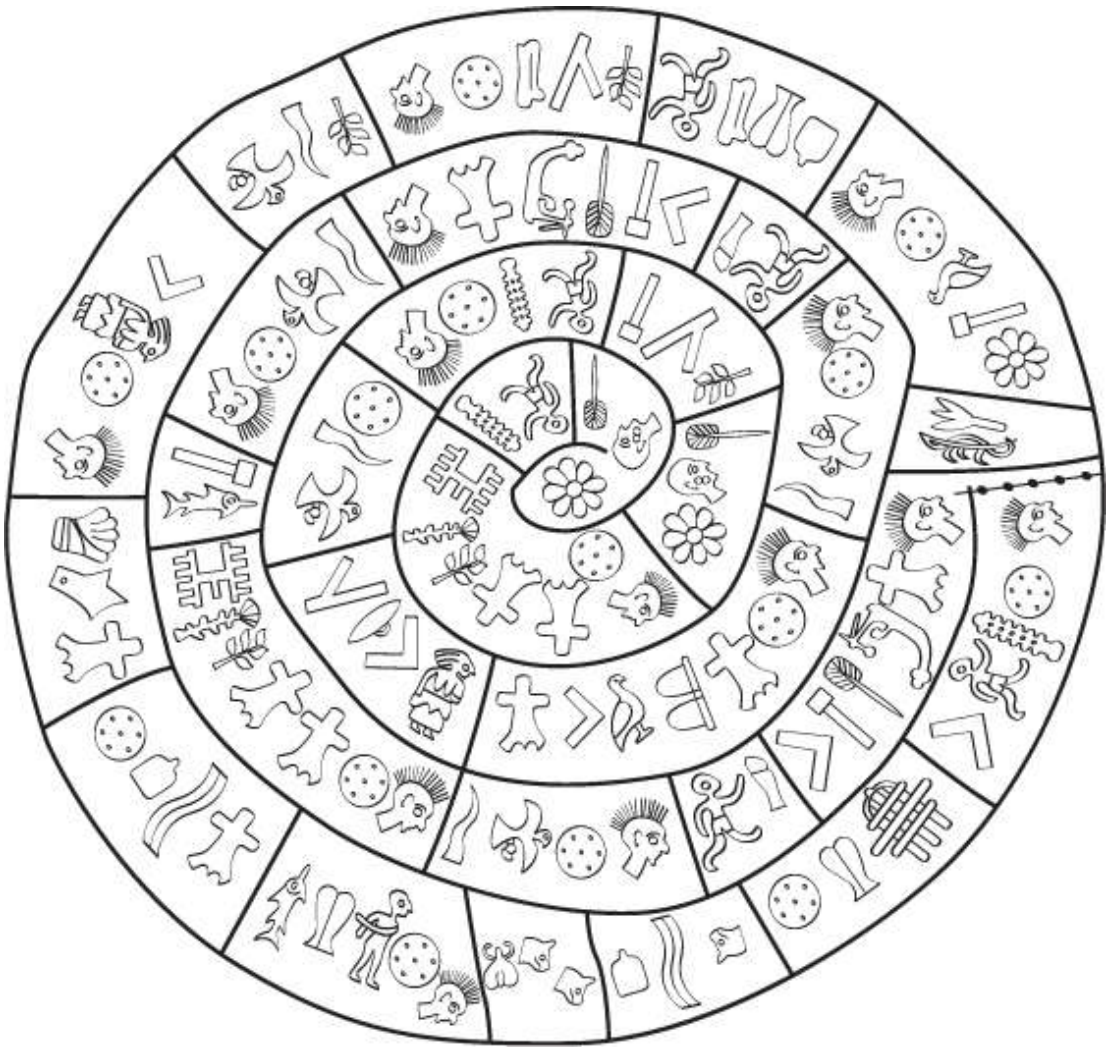
8
PLACES WHERE
SACRED GEOMETRY
IS FOUND

Certain shapes and calculations have been named for, or by, the people who published their studies on geometry and mathematics, but there is evidence that this information has been known for thousands of years. Sacred geometry can be found carved into ancient buildings and used in decoration, with its mathematical ratios apparent in construction and art.

Ancient Civilizations

As mentioned in chapter 6, the pyramids in Egypt were constructed to the ratio of phi, and this was achieved without the use of the sophisticated technology that we have today. The ancient Greeks incorporated perspective into their temples, calculating proportions to achieve the result whereby the building looked perfect no matter at what distance it was viewed. This is similar to the way that advertisements are created on sports fields, so that when you're viewing the game on a TV screen, the image will be the correct proportion.

Geometric patterns have been found in many cave paintings. These include circles, spirals, quadrangles, and triangles, as well as various lined patterns, although the meanings attributed to these symbols can only be guessed at. Stone circles appear in many sites across Europe and a few other places around the world. The exact reason for these circles is not known, but researchers suggest that the stone circles would have been places for ceremonies and worship to take place. Most of these sites appear to have been constructed during the Neolithic period (ca. 5000 BCE) through to the Bronze Age (ca. 3000 BCE).



The front of the Phaistos disc

The Phaistos disc, discovered in 1908, is a circular disc from the Bronze Age consisting of many carvings of hieroglyphs, and recent researchers now believe that the purpose of this disc is a form of prayer. However, there is some conjecture that drawing a line between the matching symbols on one or both sides of the Phaistos disc produces various triangles and other geometric shapes. Also discovered from the Bronze Age are hats/bowls of gold with intricate geometric designs, and it is speculated that these objects would be used for ceremonies.

During the Iron Age it became popular to decorate items with swirls and spirals, and there are many examples of jewelry covered in this kind of decoration. In County Galway, Ireland, there is a ritual stone with curves and spirals carved on it called the Turoe stone. Originally from an Iron Age fort, this stone contains a triskelion among the carvings. There is also the

Castlestrange stone in County Roscommon, Ireland, which is carved in a similar fashion.

Native American Symbolism

Native Americans historically used images to depict daily life. Symbolism is an important part of the Native American culture, and many examples of artwork include geometric shapes. Symbols varied between tribes, much like regional accents, so the meanings described here do not apply to every tribe. The only symbols described here are the ones that are geometrically shaped; there are many more covering such subjects as animals and their tracks, people, and layout of the land.

Symbol	Meaning
	The Great Spirit is a Native American deity symbolized by a circle surrounded by another circle inside a rhombus.
	Similarly, the eye of the medicine man is a point within a rhombus, surrounded by a rhombus.
	Days are drawn as circles and nights are illustrated as filled half circles. The number of days and nights is conveyed by the number of circles.
	Housing is represented by a tepee symbol of an upward-pointing triangle with the side edges extended slightly. A camp is depicted with more than one tepee.
	Rain is illustrated by a half circle with lines coming down from the underside.
	Butterflies are believed to be the bringer of dreams, and they are represented by an irregular hexagon (shape with six sides) in a bow tie shape.
	The sun can be portrayed in a few ways, so the center could be a circle or spiral with lines extending outward, sometimes in the form of a cross, or they can be spaced equally around the center.
	The elements are also represented by circles. Air is a point in a circle, fire is an empty circle, water is a horizontal line through a circle, and earth is a cross in a circle.
	Hope is symbolized by an eight-pointed star inside a circle. This can also stand for guidance or protection.
	Two zigzag lines show mountains.
	A triskelion is connected with the homecoming and the welcoming of warriors home after a battle.
	Stars are generally represented by a four-pointed star shape. Paintings exist from four different tribes showing the Leonid meteor shower in 1833, which is depicted as many stars. The morning star is symbolized with an eight-pointed star in the shape of a cross.

A Meditation to Meet Your Spirit Animal

- Sit quietly in a place where you won't be disturbed. You might want to play some Native American music while you meditate.
- When you are ready, close your eyes and picture yourself standing at the edge of a wood.
- Take a moment to honor and connect with Mother Earth, feeling your feet firmly upon the earth and breathing in the scents of nature.

- When you are ready, walk into the wood and continue walking until you come to a clearing.
- Seat yourself in the clearing and ask your spirit animal to join you.
- Patiently wait for whatever animal appears.
- If you get the urge to walk somewhere else, listen to your intuition; it may be that you need to meet your spirit animal in a different setting.
- When you meet your spirit animal, greet him/her respectfully and spend some time sitting together.
- When you have finished your meditation, thank your spirit animal and retrace your steps to where you started.
- Take a moment to come back to your body before opening your eyes.

Some spirit animals stay with us throughout our lives, whereas others come to help us at certain times when we need them. You may like to do some research on the symbolism of your spirit animal to discover what it means to you at this particular time.

Egyptian Hieroglyphs

The Eye of Ra and the Eye of Horus

Egyptian hieroglyphs are probably among the most well known in the world. There is a wide array of sigils with some representing meanings or ideas and other symbols assigned to sounds or syllables. The symbol of the ankh (a cross with a loop at the top) originated in Egypt, and it is believed to represent eternal life. The ankh is also sometimes used in the Christian faith.

The symbol the Eye of Horus corresponds to the sky god who lost his left eye in a battle with another god called Set. The Eye of Horus is sometimes known as *Wadjet*, which means "whole" or "healthy," due to the fact that the missing eye was restored by the god Thoth.

The Eye of Ra symbol is a depiction of the female counterpart of the sun god, Ra. This counterpart is also represented by a cobra or lioness, illustrating her willingness to use violence to avenge Ra. The Eye of Ra (his right eye) is often colored red, while the Eye of Horus (his left eye) is sometimes blue. Both eyes were drawn and worn as amulets for protection.

Plants, Animals, and Nature

Sacred geometry is found in many places in nature, from the shape of plant leaves and petals, to the ratio of growth in creatures. Many flowers have petals in a pentacle or hexagram formation, such as cinquefoil, a yellow-flowered plant named for the shape that its petals form. The trefoil plant, which is also known as clover, has leaves in the trefoil shape. Some leaves, especially on trees, are in the shape of a mandorla. When viewed from below, pinecones have the appearance of a two-dimensional torus.

Hexagons are common polygons seen in nature, and snowflakes naturally form in this shape. The honeycomb in a beehive contains many hexagonal chambers. The Giant's Causeway in Ireland is a natural formation of basalt columns, most of the columns being hexagonal, and there is also a hexagonal shape on one of the poles of the planet Neptune.

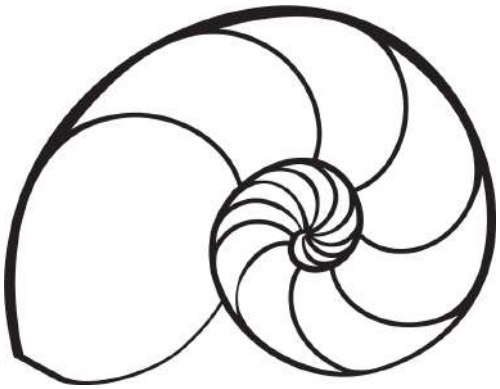
Circles and spheres are also common shapes in nature and can be seen in the shape of tree trunks, the caps of fungi, ripples on a pond from a raindrop, fruits, and many other areas. Circles and spheres show movement outward from a single point.

The shape of a nautilus shell follows a logarithmic spiral: each successive chamber that is added to the spiral increases in surface area. This is also true for some snail species. The logarithmic spiral can also be seen in the growth of the species of aloe vera known as *polyphylla*.

A Meditation on a Spiral Shell

If you have a cross section of a spiral shell or an ammonite in your possession, you might like to hold it during the meditation. If not, you can meditate with a picture.

- Focus on the appearance of the shell.
- Visualize yourself at the very center and picture your consciousness moving into the next chamber. Keep moving your consciousness into bigger and bigger chambers until you reach a place that you would like to stop.
- Ask the shell/picture what it can teach you at this time. You may receive words, pictures, or just a feeling.
- When you have finished, thank the shell/picture and write down what you experienced.



Biology, Chemistry, and Physics

Biologically, new life begins with one circular egg cell dividing into two, as with vesica pisces. The two cells then both divide into two (making four cells), and each of those cells divides into two with the resulting formation of eight cells resembling the egg of life.

Spherical bacteria (known as *cocci*, which is Greek for "berry") reproduce in a similar way as an egg cell. A single cell by itself is called a coccus, two cells are known as diplococci, four cells are a tetrad, and eight cells are named sarcina.

The shape of a DNA helix can be found in the flower of life by tracing the curve of the intersections from one side to the other. Images of cross sections of DNA have been presented by Dr. Robert Langridge, and the pictures reveal beautiful symmetrical patterns.

Chemical molecular structures are sometimes arranged in geometric forms. Trigonal planar refers to a triangle formation (three vertices), tetrahedral, in the shape of a tetrahedron (four vertices); trigonal bipyramidal is a shape similar to two joined tetrahedrons (five vertices); and octahedral has the structure of an octahedron (six vertices).

Physics and mathematics go hand in hand, so in order to calculate cause and effect in physics, ratios and equations are needed. Geometry is often used to arrive at the answer to a question. Triangles, for example, are utilized in calculating distance, and they are also sometimes useful as "formula triangles," where there are three aspects of an equation.

Crystals

Crystals have been considered sacred for hundreds of years. They have been used in religious ceremonies and even crushed and used as remedies to cure illness. There are seven geometric shapes that form the structure of a crystal:

- Cubic: all axes are at right angles and the same length
- Hexagonal: has four axes of which three are on the same plane and of equal length (making the hexagon shape) and the fourth is at a right angle
- Monoclinic: two axes are at right angles, with the third angle being greater than 90° (resembles a parallelogram)
- Orthorhombic: all three axes are unequal, but all are at right angles
- Tetragonal: all axes are at right angles, but one axis is longer than the other two
- Triclinic: all three axes are unequal and none are at right angles (the shape formed being a trapezoid)
- Trigonal: all three axes are of equal length, but none are at right angles (resembles a rhombus)

Crystal specimens may not exhibit any of these shapes, because minerals can form as massive structures rather than single small prisms. Any crystals that do not have a geometric structure are referred to as amorphous. These include crystals such as obsidian, which forms from molten glass, and amber, which is tree resin.

CRYSTAL GUIDE

Color	Red
Hexagonal	Red Calcite
Orthorhombic	Zoisite
Cubic	Garnet
Triclinic	Rhodonite
Trigonal	Red Jasper
Monoclinic	Red Serpentine
Tetragonal	Red Zircon

Color	Orange
Hexagonal	Orange Calcite
Orthorhombic	Orange Spinel
Cubic	Orange Halite
Triclinic	Sunstone
Trigonal	Carnelian
Monoclinic	Orange Selenite
Tetragonal	Orange Zircon

Color	Yellow
Hexagonal	Golden Calcite
Orthorhombic	Yellow Topaz
Cubic	Yellow Fluorite
Triclinic	Amblygonite
Trigonal	Citrine
Monoclinic	Yellow Kunzite
Tetragonal	Yellow Zircon

Color	Green
Hexagonal	Green Calcite
Orthorhombic	Andalusite
Cubic	Green Fluorite
Triclinic	Amazonite
Trigonal	Kambaba Jasper
Monoclinic	Malachite
Tetragonal	Idocrase

Color	Blue
Hexagonal	Blue Calcite
Orthorhombic	Angelite
Cubic	Blue Fluorite
Triclinic	Larimar
Trigonal	Blue Lace Agate
Monoclinic	Lazulite
Tetragonal	Blue Zircon

Color	Indigo
Hexagonal	Covellite
Orthorhombic	Dumorturite
Cubic	Lapis Lazuli
Triclinic	Kyanite
Trigonal	Blue Aventurine
Monoclinic	Blue Jade
Tetragonal	Blue Scapolite

Color	Violet
Hexagonal	Sugilite
Orthorhombic	Purpurite
Cubic	Purple Fluorite
Triclinic	Purple Labradorite
Trigonal	Amethyst
Monoclinic	Lepidolite
Tetragonal	Purple Scapolite

Color	Clear
Hexagonal	Quartz
Orthorhombic	Clear Topaz
Cubic	Diamond
Triclinic	Ulexite
Trigonal	Herkimer Diamond
Monoclinic	Selenite
Tetragonal	Apophyllite

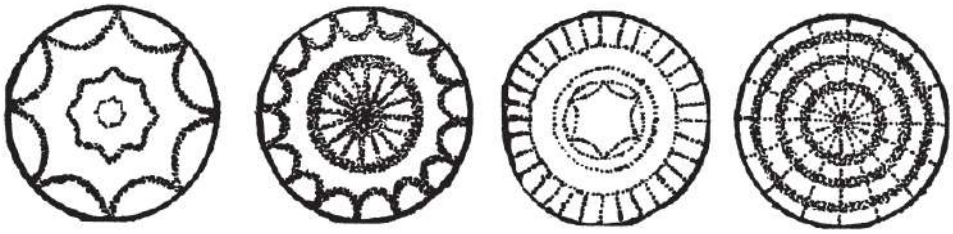
A Crystal Meditation

You can try meditating with each of the crystal structures: the following chart shows some examples of crystals of the same color for each crystal structure.

- Have a notepad and pen ready.
- In your other hand, hold one of the crystals.
- Ask the crystal's permission to connect with it, and then write down any words or feelings that come to mind.
- Continue for five minutes before putting that crystal to one side and picking up a different stone to connect with.
- At the end of the meditation, look back through your notes and see what you picked up from the crystals' energy.

Sound

In 1680 an English physicist named Robert Hooke conducted an interesting experiment with sound. He covered a glass plate with flour and ran a violin bow along the edge of the glass to make it vibrate. What he found was that the flour moved to form patterns; the areas where the flour settled are called "nodal lines," which pointed to the areas of the plate that were *not* vibrating.



Chladni figures

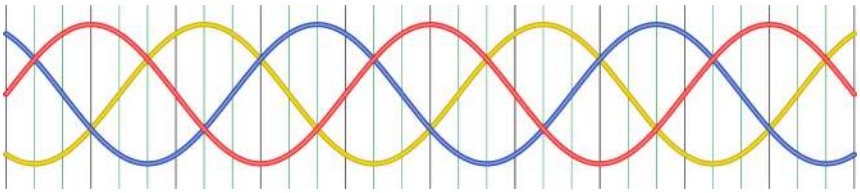
Ernst Chladni, a German physicist and musician, expanded on Hooke's experiments using a violin bow on a metal plate covered in sand. In 1787, Chladni published a book titled *Entdeckungen über die Theorie des Klanges (Discoveries in the Theory of Sound)* with illustrations of the patterns created, and these came to be known as Chladni figures.

Nowadays people use a metal plate attached to a speaker and a tone generator to create Chladni figures. Using different sound frequencies changes the appearance of the pattern, but only whole-number frequencies produce complete patterns, and any fractions result in distorted lines.

Jules Antoine Lissajous was a French physicist who created a device to see a visual representation of a sound wave (sine wave). This device became known as the Lissajous apparatus and consisted of a small mirror at the end of a tuning fork. A beam of light was then shone so that it reflected from the vibrating tuning fork to another mirror and onto a dark background. This produced a visible sine wave. When this experiment was carried out with two vibrating tuning forks (the first fork reflecting onto a second fork, then onto the dark screen), the result was curving patterns now known as a Lissajous curve, or Lissajous knot. By varying the frequencies of the tuning forks used, Lissajous was able to produce different patterns.

A harmonograph is a device that consists of a double pendulum attached to a pen. The pendulums move perpendicularly to each other, creating patterns that resemble Lissajous curves. These shapes were first called Bowditch

curves after Nathaniel Bowditch, who studied the patterns in 1815, only for them to later be named after Lissajous in 1857. Jan Budkowski won prizes for photography back in the 1970s when he created these patterns in photographic form with a reasonably good camera.



Om Chant

The om sound is used as a form of meditation. The sound of the word is stretched, with an exaggerated “ah” sound at the beginning, followed by “oh” and finally “mm.” Try to make the om last as long as you can, and experiment with different pitches. The deeper the tone of your chanting, the more you will feel the vibration of the sound in your chest. You could also use an online tone generator if there is a particular frequency of tone you would like to try.

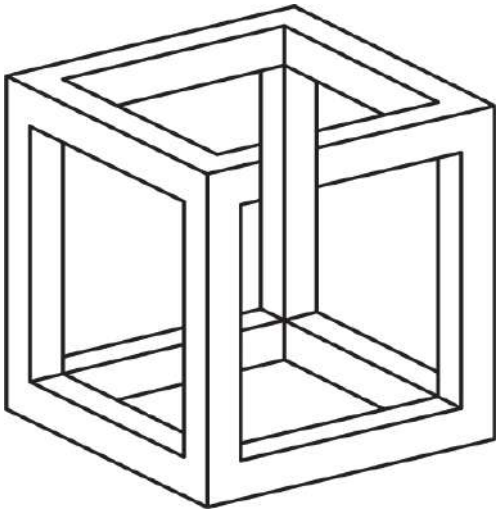
Art

The golden ratio has been used in paintings for hundreds of years. One of the most commonly analyzed artworks is *The Last Supper* by Leonardo da Vinci. It employs many examples of the golden rectangle both in the placement of people and objects, and in the objects themselves.

Cubes and straight lines are often used in optical illusions due to the fact that this type of geometry follows certain rules. Our brains make assumptions based on these rules, and the illusion occurs when our minds cannot make sense of the proportions illustrated. Other examples include concentric circles that seem to move or shimmer as the image is moved.

In photography the "rule of thirds" is a guideline for visualizing the photograph as a grid of nine squares and arranging the subject matter so that the main focus point is on, or close to, intersecting gridlines. The golden rectangle can also be used as a grid, usually with the smallest rectangles being the focal point of the picture, but sometimes the object of the photograph is seen in the largest rectangle. The golden spiral is used as well, especially when working with curves.

Crop circles are amazing pieces of artwork that have been found all around the world. They are created by flattening tall grasses, which are usually types of crops. As the name suggests, most of these shapes are based on circles, but they can contain many different geometric shapes. There is some debate over who the artists of the circles are and even an argument that they were created by aliens, but that aside, there are some incredible examples ranging from basic to very complex.



Although coins are most often circular in shape, there have been some uncommon shapes as well.

- In Britain the old threepenny coin was an octagon, and nowadays, the fifty pence and twenty pence pieces are both heptagons, while the one-pound coin is a dodecagon.
- In the 1990s Bermuda pressed some special coins in the shape of a Reuleaux triangle.
- The Cook Islands and Australia have both had coins in the shape of a triangle with rounded corners.
- Several countries, including India, Bangladesh, Pakistan, and Sri Lanka, have had a square coin with rounded corners.
- A hexagon was used for early Belgian currency and also Egyptian currency.
- The decagon has also been a popular choice of shape for coins.
- Chinese "lucky coins" are circular with a square hole in the center. The Chinese often put a coin into the mouth of an ornamental plaster statuette of a lucky frog.

Flags also contain examples of geometry:

- The Brazilian flag has a rhombus.
- The Japanese flag has a circle.
- Guam's flag has a mandorla.
- • The flag for the Isle of Man has a triskelion of three legs.
- India's flag shows a "chakra" or wheel.
- Nepal is currently the only country with a square flag instead of a rectangle.

Company Logos

Businesses are very astute when it comes to marketing their brands, and careful consideration is given to colors and shapes and the image that the company wants to convey. From car manufacturers to clothing brands, many big names are easily recognizable from their logos, including examples of the geometry within this book. Many companies include a circle in the image, giving the impression that they are all-inclusive and provide everything you could want, whereas stars may be used to suggest that the company outshines the competition.

Heraldry

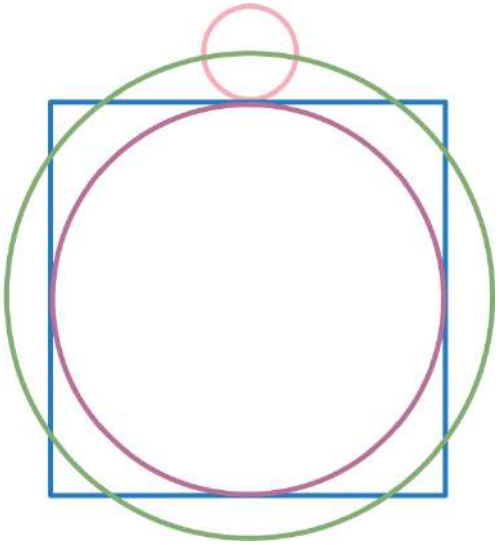
Coats of arms, otherwise known as heraldry, are displays of family crests. Although some heraldic arms may include creatures and other symbolic icons, many of the older examples were simple geometric shapes, known as ordinaries.

- A pale was a vertical line down a shield.
- A fess was a horizontal line.
- A cross consisted of both a pale and a fess.
- A bend was a diagonal line.
- Two diagonal lines were known as a saltire.
- A chevron was a line that started at the bottom left, then went up to the center and down to the bottom right. (This could also be reversed to start at the top left and go down toward the center.)
- A pile was a triangle pointing down from the top of the shield.
- A chief was a line across the top of the shield.
- The pall was a Y- shaped line covering the whole shield.
- A border around the edge was known as a *bordure*.

Sometimes shields were checkered—divided into quarters of different colors. And quartering became a way of incorporating different coats of arms onto one shield, which came about from one family marrying into another.

Space

All planets and stars are spheres, owing to gravity's pull toward the center of each astral body. The earth and our moon exhibit some interesting mathematical facts. The ratio of the moon's size to that of the earth is 3:11. The time it takes for the moon to circle the earth is 27.3 days, and if we take the ratio and turn it into an equation, we get, $3 \div 11 = 0.273$. We can divide the number 1 by 0.273 and the result is 3.66; this is very close to the number of days in an earth year, which is a little less than 366 days. If a sphere representing the earth is placed inside a square, and then a smaller sphere representing the moon with the ratio 3:11 is placed beside, a circle can be drawn around the earth and passed through the center of the moon which has the same circumference as the square's perimeter.



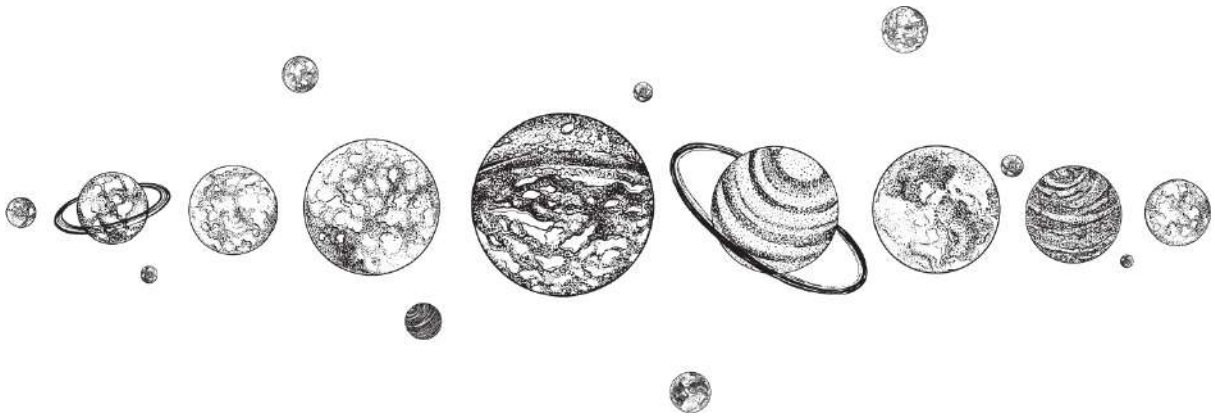
When viewed from earth, the path of Venus through the sky can be traced as a "rose" type of formation. Venus takes just over 224 days to orbit the sun, compared to earth's orbit of just over 365 days. It takes eight earth years to achieve the rose, which equates to Venus orbiting the sun thirteen times. The planet Venus was named after the Roman goddess Venus, who represented love and beauty, and the Venus rose was used by the Romans to symbolize these attributes as well.

Observing the orbit of any two given planets by drawing a line between them every few days has created some stunning patterns. Saturn and Jupiter form the shape of a quatrefoil, Uranus and Saturn create a star-like image with thirteen arms, and a slightly misshapen heptagram is the result of eight orbits

of Mars and Earth. These illustrations are known as the “Dances of the Planets.”

Some galaxies exhibit a spiral-like formation, which has led some astronomers to conjecture that this shape indicates the creation of new solar systems. As mentioned before, spirals indicate either contraction or growth.

In the early days of astronomy, the only planets that were known were those that could be seen by the naked eye, which were Mercury, Venus, Mars, Jupiter, and Saturn. Most planets were named after Roman gods. Each astral body had a symbol assigned to it and was also connected with a day of the week as well as a metal. There is some debate over the symbols, but the accompanying chart contains the most popular beliefs.



SUN		
Symbol: ☉	Metal: Gold	Day: Sunday
A shield or circle to represent the shape of the sun. The spot inside possibly represents a sunspot.		
MERCURY		
Symbol: ☿	Metal: Mercury	Day: Wednesday
Connected with the god Mercury. The symbol shows his head with a winged cap. The cross below portrays his caduceus (type of staff).		

VENUS		
Symbol: ♀	Metal: Copper	Day: Friday
Dedicated to the goddess of love, Venus. The circle with a cross underneath is said to depict her hand mirror and is also used as a symbol for the feminine/female.		
EARTH		
Symbol: ♁		
There are two versions of the earth: either a globe with meridian lines separating the planet into four quarters, or a globe with a cross on top.		
MOON		
Symbol: ☾	Metal: Silver	Day: Monday
The moon is most often seen as a crescent, either waxing or waning.		
MARS		
Symbol ♂	Metal: Iron	Day: Tuesday
Associated with Mars, the Roman god of war, the circle represents a shield, and the upward-pointing arrow suggests a spear. This symbol is associated with the masculine/male.		
JUPITER		
Symbol: ♃	Metal: Tin	Day: Thursday
Some say that this depicts Jupiter's eagle or thunderbolt, while others believe that it is the first letter of Zeus (the Greek equivalent of Jupiter) with a line through to denote it has been abbreviated.		
SATURN		
Symbol: ♄	Metal: Lead	Day: Saturday
This symbol is believed to correspond to a scythe. Saturn was often shown as a man holding a scythe, because he was the god of agriculture.		
URANUS		
The only planet to be named after a Greek god, Uranus was also known as "Father Sky," and his symbol is an amalgamation of the rulership of Jupiter and the power of Mars. It is said to have a more mundane secondary origin, because the symbol is an H—named after William Herschel, who discovered the planet—with the planet hanging below the H symbol, but that may not be true.		
NEPTUNE		
Symbol: ♆		

The trident (three-pronged fork) was the weapon of Neptune, god of the ocean.
PLUTO
Symbol: ♇
There are two versions of this symbol: one is a monogram of Pluto (P and L), and the other is connected with Pluto, god of the underworld, representing his two-pronged spear underneath and his circular cap of invisibility floating above. The monogram is said to be in honor of Percival Lowell, who was said to have discovered Pluto. As it happens, he did not, because it was someone who worked for him who made the discovery, but Lowell took the credit for it. It is possible that the change of logo was made when this was finally proved to be the case!

Minor planets, asteroids, and comets are also portrayed as symbols, but they are too numerous to list here.

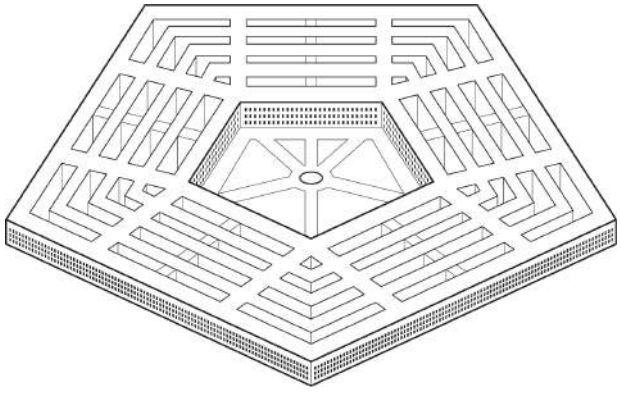
Architecture

Sacred geometry was historically important in the construction of religious places of worship. Geometric polygons are often seen in the windows, either as decoration or as the shape of the window itself. Internal decoration also included symbols, with the focal point of worship having religious symbols of that faith.

The square, triangle, and hexagon are regular polygons that can be tiled (tessellated) easily, so these shapes were often used as floor decoration.

Many buildings are constructed with a regular quadrangle floor plan, meaning that they are easy and quick to erect, but there are some unusual buildings created using other geometric shapes:

- The Gherkin in London, England, is an example of an elongated mandorla.
- In Guangzhou, China, there is a three-dimensional torus building known as the Guangzhou Circle Mansion.
- The Flatiron Building in New York City has the footprint of a triangle.
- The Pentagon in Arlington, Virginia, USA, is named after its shape. Some examples of religious-building design consisting of sacred geometry include:
- The Great Mosque of Mecca in Saudi Arabia, which is shaped like a cube.
- The Roman Catholic church Iglesia de la Vera Cruz in Segovia, Spain, is in the shape of a dodecagon.

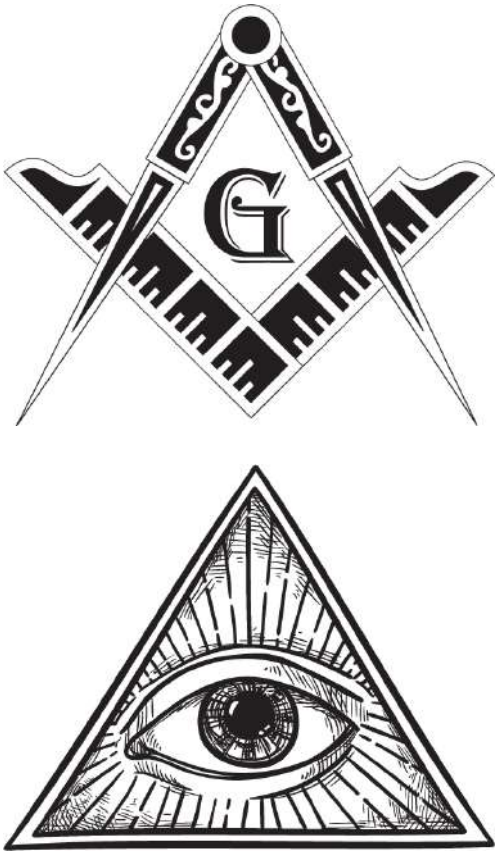


- The Circular Congregational Church in Charleston, South Carolina, USA, is well … circular.
- There is an octagonal church in Haldarsvik, a village on the Faroe Islands.

- Many Hindu temples have pyramids on top.
- Sikh gurdwaras frequently have domed roofs.

Freemasonry

Geometry is at the core of Freemasonry. The Freemasons are a group that is dedicated to knowledge and self-development, and the organization contains many symbolic icons. The logo itself is a compass and a set square with a G in the center, which stands for geometry and also for God. It is said that the compass is used to draw circles and spheres and is therefore equated with the realms of space and the heavens. The set square represents the qualities of the square, which are strong foundations, integrity, and also accuracy and precision. Both items together illustrate the connection between heaven and earth.



The "all-seeing eye" is in the shape of the mandorla—the central part of vesica pisces—and that represents the fact that God, who is referred to as the "Great Architect of the Universe," sees all.

They also use two globes on pillars as emblems of learning, with particular emphasis placed on subjects such as astronomy, geography, and navigation.

The columns symbolize the fact that learning and knowledge are the foundations of Freemasonry.

There are three supporting pillars of masonry: wisdom (an Ionic column), strength (a Doric column), and beauty (a Corinthian column). Some illustrations show the pillar of wisdom with a sun above, the pillar of strength with a moon, and the pillar of beauty with stars above. The number three, equating to balance and harmony, also appears in the three muses—Faith, Hope, and Charity—as well as the three ornaments of a lodge: the mosaic pavement, the indented tessel, and the blazing star.

The blazing star is a pentagram that is seen as a reference either to the star that guided the three Wise Men during the nativity, or to Moses, whose face shone as he brought the Ten Commandments down the mountain.

A point within the circle between two parallel vertical lines represents an individual within the boundary of his duty to God and others, with the parallel lines corresponding to St. John the Baptist and St. John the Evangelist.

The Ashlar rough and the Ashlar perfect are two cubes of rock that symbolize the place we are at currently, and what we aspire to be.

Reiki

Reiki is a form of healing whereby a therapist channels energy from the Universe/Source/God (whatever your preferred term) directly to a client. Symbols are used to facilitate the flow of energy. There are now many different forms of reiki, and each comes with its own sacred symbols that are learned in the second initiation ceremony.

Reiki healing depends on symbols for activation, three of which are far from secret, whereas others are known only to reiki masters, who have gone through all the stages of study and attunement. Here is one symbol that you can meditate on without breaking any rules for those times when you need to give yourself some healing.

Cho-Ku-Rei, pronounced cho-koo-ray, is known as the power symbol. And it means something like "may the reiki flow here." This symbol is like a key that opens the door for the universal energy to flow, so when you use this symbol, you are invoking a very powerful source that needs to be given the respect it deserves.

Begin by tapping your palm three times and saying the name of the symbol, *Cho-Ku-Rei*, aloud with each tap while visualizing the symbol moving into your hand. Now you can use the reiki energy to give yourself or your loved ones some healing.

Chakras

The chakras are energetic areas on the body that equate physically with points along the endocrine system. There are seven main chakras that are set in a line that rises up the center of the body, parallel to the spine, and each chakra has a different symbol associated with it. Illustrations range from very basic icons to very complex examples with lots of detail. Here are some basic geometric facts relating to the chakras:

Base Chakra

Shape: a downward-pointing triangle in a square, inside a circle, with four petals surrounding it.

This chakra is associated with the earth, hence the square. The triangle points downward to show connection to the earth. The aspects of this chakra are security and foundations.

Sacral Chakra

Shape: a crescent inside a circle, with six or eight petals surrounding it.

The crescent and circle represent the moon, which corresponds to cycles and emotions. This chakra is perceived as the emotional center.

Solar Plexus Chakra

Shape: a downward-pointing triangle inside a circle, with ten petals surrounding it.

The circle in this case epitomizes the sun, which is seen as masculine. Masculine energy is considered to be decisive and active, and this chakra is associated with will and decision making. The downward-pointing triangle in this case shows that this chakra is closely linked with the chakras below.

Heart Chakra

Shape: a star tetrahedron inside a circle, with twelve petals surrounding it.

The heart chakra embodies love and it is a center of balance. This is reflected in the combination of the feminine downward-pointing triangle and the masculine upward-pointing triangle. It also shows that this chakra is closely connected with all the chakras above and below and acts as the bridge or link between them.

Throat Chakra

Shape: a circle inside a downward-pointing triangle, inside a circle, with sixteen petals surrounding it.

The triangle in this symbol can refer to both the connection with the heart chakra, which is below, as in “speaking from the heart,” but also speaking with wisdom drawn downward from the brow chakra that is immediately above. The circle in this situation portrays God, Goddess, Creator, and/or Universe.

Brow Chakra

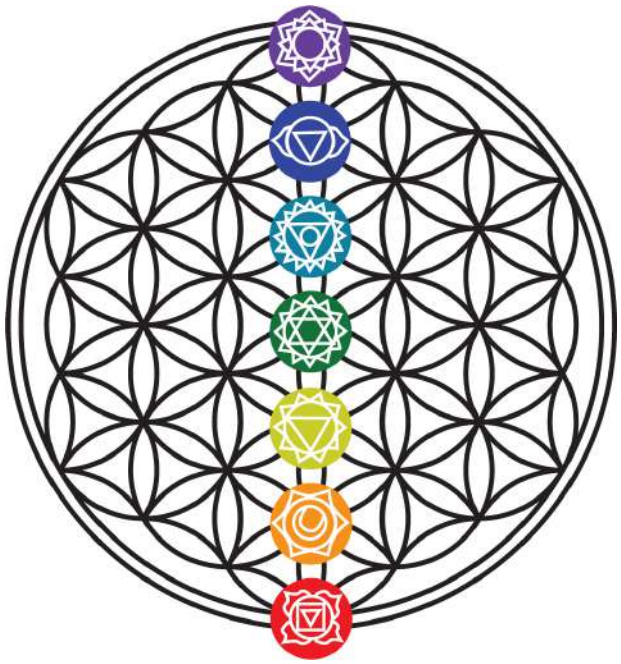
Shape: a downward-pointing triangle inside a circle, with two petals on either side.

As with the throat chakra, the circle represents God, Goddess, Creator, and/or Universe, while the triangle shows energy traveling down from the crown.

Crown Chakra

Shape: a circle surrounded by a thousand petals.

The petals in some illustrations closely resemble the two-dimensional torus, which represents flow, and connection with "All That Is." The circle is emblematic of God, Goddess, Creator, and/or Universe.



Tip

When the seven chakras are overlaid onto the flower of life, the heart chakra sits at the center.

A Chakra Meditation

This meditation brings in different-colored light to rejuvenate and balance the chakras.

- Sit comfortably and close your eyes.
- Make sure you are grounded before you begin the meditation by visualizing roots growing from the soles of your feet, deep into the ground.
- Visualize a clear, bright red light coming from the Source, in through the top of your head, and traveling down your body to your base chakra, at the pubic bone. Continue this for a couple of minutes, or for as long as you feel you need to.
- Now visualize a clear, bright orange light coming in through the top of your head and traveling down to your sacral chakra, which is two finger widths beneath your naval.

- Next visualize a clear, bright yellow light traveling down to your solar plexus chakra, which is just below where the breastbone ends.
- Then visualize a clear, mid-green light that goes down to your heart chakra, in the center of your chest.
- Visualize a clear, light blue light traveling to your throat chakra, which is at the bottom of your throat between the sternal notches.
- For the brow chakra, visualize a clear, dark blue light traveling to a point just above and between your eyebrows.
- Lastly, visualize a clear, purple light coming straight into your crown, at the top of your head.

This visualization can also be done for a single chakra if you need a boost in one area.

Buddhism

When we think of Buddhism, the first symbol that comes to mind is probably the figure of a meditating Buddha. One of the main symbols of Buddhism is the Dharma Wheel, which is sometimes known as Dharma Chakra. This is a circular icon with eight spokes resembling a chariot wheel, and it is one of the Ashtamangala, which is a collection of eight auspicious symbols. The Dharma Wheel as a whole represents the eightfold path, which is the teachings for a fulfilled life. The components of the chariot wheel also have individual symbolism, so the circle shape of the wheel represents the perfection of Buddha's teachings, the rim symbolizes concentration, and the hub is associated with discipline. The lessons of the eightfold path are right understanding, right thought, right speech, right action, right livelihood, right effort, right mindfulness, and right concentration.

There is also a form of the Dharma Wheel called the Ashoka, or Ashok Chakra, which has twenty-four spokes and is seen on the Indian flag. Also referred to as the "Wheel of Duty," this symbol represents the twenty-four virtues, according to the teachings of Buddha:

1. Hope
2. Love
3. Courage
4. Patience
5. Peacefulness
6. Kindness
7. Goodness

8. Faithfulness
9. Gentleness
10. Self-control
11. Selflessness
12. Self-sacrifice
13. Truthfulness
14. Righteousness
15. Justice
16. Mercy
17. Graciousness
18. Humility
19. Empathy
20. Sympathy
21. Supreme knowledge
22. Supreme wisdom
23. Supreme morality
24. Altruism

Endless Knot

Another of the Ashtamangala that is geometric is the endless knot. This symbol is a continuous line that forms six squares altogether. Also known as the eternal knot, this emblem illustrates Buddha's endless wisdom and compassion. It can also be a metaphor for karma and a reminder that all actions have effects.

>Buddhists sometimes do this mindfulness meditation:

- Sit quietly, close your eyes, and slow your breathing.
- What observations can you make about what you are sensing right now: What do you hear? Can you smell anything? And so on.
- Examine how you feel about each thing that you are sensing right now. Are these positive or negative feelings?
- Think about how you are responding mentally to each of these feelings: Does it bring up emotions? Does a memory come up? And so on.
- Take a mental step back and observe the process you went through, from sensing to feeling to thinking.
- When you have finished meditating, take a deep breath in and, when you release the breath, visualize that all of your attachment to what you observed is released with your breath. (Or you can visualize the release

going down through your body, down your legs into the earth if you find that easier.)

- Open your eyes when ready.

Astrology

Astrology, like astronomy, is the study of the stars. But whereas astronomy is concerned with the physical state of the cosmos, astrology delves into the spiritual, psychological, and predictive uses of them.

Astronomers observed stars as they moved throughout the sky and developed ways of recognizing the patterns of certain star clusters. The brightest stars were connected by lines and these linear patterns were then named after ancient gods, often imagined in the form of animals and of ancient heroes.

The zodiac constellations are connected with the sun's passage through the sky throughout the year. The ancients thought the sun orbited the earth, and this apparent path was known as, and is still known as, the plane of the ecliptic, but we know it better as the zodiac.

The constellations that lie along the zodiac are the famous signs of the zodiac, and there are twelve of these in total. The sun moves into a different one of these each month. Below is the symbolism of each sign of the zodiac as we know it now, but in some cases, there have been other symbols or slight variations on the theme and I mention those here as well.

Aries

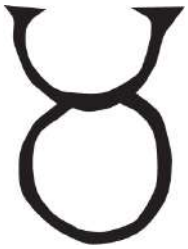
Aries became associated with a ram, and the symbol suggests the horns of a ram.

At some point in the ancient past, Aries was associated with a sheep but also a goose.

Taurus

Taurus has always been seen as a bull, and the symbol shows the head and horns of the bull.

Bulls were considered sacred at one time in ancient Egypt, and even now you can see mummified bulls in the museum at Alexandria. However, the bull was also a symbol for the pagan god Baal, which may be where the word *bull* came from.



Gemini

Gemini is known as the twins, as it has two long, leggy parts, and the two major stars on the ends of each section are Castor and Pollux.

Cancer

The constellation of Cancer became a crab, with the symbol representing the crab's two pincers.

The symbol is also said to represent a woman's breasts, which are ruled by the sign of Cancer in astrology.

Leo

Leo is visualized as a lion, with a body and mane. The shape of the constellation really does look like a crouching lion.

Virgo

The constellation of Virgo resembles the outline of a young woman. The symbol owes its design to a monogram of ΠΑΡ, which are the first three letters of the Greek word *parthenos*, meaning "virgin." She is also known as the

“maiden,” which is an ancient word for a young woman who was considered to be a virgin.

She is usually shown carrying a sheaf of wheat, representing the harvest, which may relate to the time of year in which this sign rules: late August and the first three weeks of September, when many different crops are harvested.

Libra

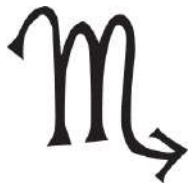
Libra resembles balance, so it is represented by a pair of scales.

This is the only inanimate object in the whole zodiac. It could have some connection with income from the sale of harvested goods, but it is usually associated with the scales of justice.

Scorpio

The curve in the Scorpio icon’s shape led to it being named for the scorpion, and the symbol reflects the stinging tail as well.

However, in terms of astrology or astronomy, this is a fairly recent development, because if we go back a few hundred years, the image was of an eagle. The four fixed signs of the bull, lion, eagle, and water bearer appear in St. Peter’s Cathedral in the Vatican and on the final Rider-Waite tarot card and in many other places.



Sagittarius

This collection of stars resembles the body of a centaur (half man, half horse) wielding a bow. The symbol echoes this with the icon of an arrow. Some call the image for Sagittarius the centaur, while others call it the archer.

Capricorn

Capricorn was associated with a mythological creature, the sea goat, which had the upper body of a goat and the tail of a fish. The symbol shows the horns and face of the goat, moving down to the curly fish tail at the end.

Not everybody likes the sea goat image, and there are many astrologers who prefer to use a mountain goat for this sign. Interestingly, in ancient times, the image for this sign was a crocodile!

Aquarius

Aquarius, which is known as the water bearer, is often depicted as a person pouring water from a vessel. The symbol shows two waves.

Some consider the contents of the pot to be knowledge, so it is knowledge rather than water that is being poured out. If, however, we remain with the water concept, it is strange that this supposedly cool and intellectual sign should be pouring water, which represents emotion in astrology and in many other spiritual systems. However, the Chinese definitely associate water with rivers and thus with communication, commerce, and the flow of knowledge and information, so can this be the connection?

Pisces

The constellation of Pisces is portrayed as two fish traveling in opposite directions, yet they are still connected.

About Astrology

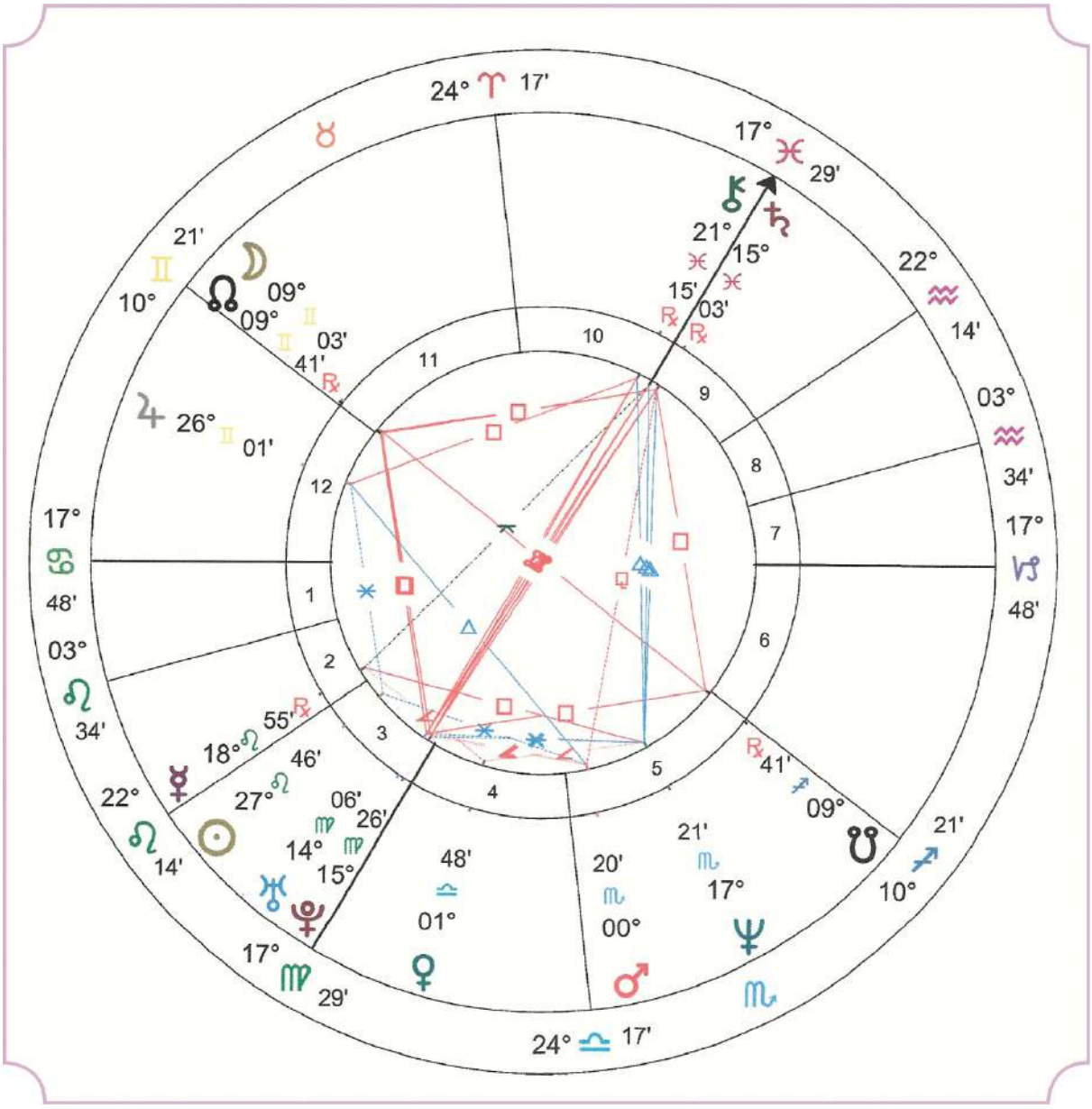
From an astrological point of view, the symbolism of the zodiac constellations, along with the attributes associated with the planets, gives insight into facets of a person's personality. To create a birth chart, an astrologer takes the date, time, and place of birth and constructs a chart showing the positions of the planets and constellations at that time. Indeed, the word *horoscope* means "map of the hour." This information is then interpreted to form a detailed breakdown of a subject's personality.

The star signs are also assigned an element, such as fire, earth, air, and water. When the signs are arranged in a circle, in order of appearance during the year, the same elements appear in a triquetra-like formation.

The signs are assigned a gender of masculine and feminine and also a quality, which can be cardinal, fixed, or mutable, and this complicates matters even further.

Astrology and Shapes

Astrology links with the shapes that we see in sacred geometry, but it does so more by accident than by design. An astrological chart is a circle and there are lines that cross the circle and planets arrayed around the circle; these form mathematical shapes when they are in "aspect" to one another. This is complex, but those of you who are getting into astrology will find it interesting. I have put these items in the same order as they appear in the list of geometrical shapes in chapter 1 on two-dimensional shapes.



An example of a natal chart, also known as a birth chart.

The Line

THE ASCENDANT/DESCENDANT LINE

In astrology a line is shown across the chart with one side representing the point on the surface of the earth where the sun was rising over the horizon at the moment of the person's birth. This point is called the ascendant. The other end of the line shows where the sun was setting at the moment of the person's birth. This point is called the descendant.

THE MIDHEAVEN/NADIR LINE

A second line runs somewhat vertically, from the point on the face of the earth where the sun was shining most strongly at the time of the person's birth, and this point is called the MC or midheaven. The line goes right through the center of the earth and out the other side, to the place that was the farthest from the sun, and therefore the darkest point, at the time of the person's birth. This point is called the IC or nadir.

THE OPPOSITION

Lines are also formed when two planets are on opposite sides of the chart to each other and are therefore 180 degrees apart. The two planets are in different elements to each other, so this can be a challenging aspect because it can be hard for the individual to reconcile the two sides of his or her personality.

The Circle

The circle is the chart itself and it represents the zodiac, through which the planets appear to pass from our perspective on earth.

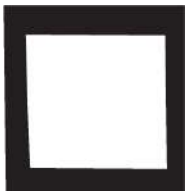
The Triangle

When two planets are roughly 120 degrees, or four signs, apart, this is called a trine. It is considered a beneficial aspect, because both planets are in signs of the same element. When three planets are 120 degrees apart from each other, they form a triangle shape; in astrology this is called a grand trine. This shape indicates an easy relationship between the planets, and it is often a sign of artistry, musicality, or creativity but also of laziness.

The Square

Two planets are said to be square to each other when they are roughly 90 degrees, or three signs, apart. This is considered challenging, because planets

are in signs of different elements. If four planets happen to be 90 degrees away from each other, they form a true square shape, but confusingly, astrologers call this a grand cross. This aspect can be hard to live with, but it can also be character building. People with squares are hard workers.



The Pentagram, or Inconjunct

This aspect can also be known as a quincunx, but it is more often called an inconjunct. Here we see two planets that are roughly 150 degrees, or five signs, apart. This is an irritating aspect because each planet is in a different element from the other. It can have health connotations or financial ones that crop up during a person's life.

The Pentagram Again, but This Time as a Quintile

This is a minor aspect that involves two planets that are 72 degrees apart. The "five" connection comes from the fact that the 360 degrees of a circle are divided by 72 five times. Even having one quintile on a birth chart is unusual, but when it happens the person is born with an excellent brain and intellect, and this enhances the activities of the two planets that are involved in the aspect.

The Hexagram, or Sextile

When two planets are 60 degrees, or two signs, apart, this is called a sextile. It is an easy aspect with a good deal of mental or intellectual compatibility between the two planets. The planets will be in different elements, but the elements involved tend to be compatible with each other such as fire and air,

or earth and water. Although it would be extremely unusual, there could be as many as six sextiles in a birth chart.

The Octagram, or Semi-Square

When two planets are 45 degrees apart, they are semi-square to each other. They are also one-and-a-half signs apart from each other. The two planets are in signs with different elements, so this is an aspect that can be irritating to live with, and it might affect such things as the person's looks, image, or ability to amass and keep personal possessions. In theory, there could be eight semi-squares on a chart, but this is highly unlikely.

The Dodecagram, or Semi-Sextile

The semi-sextile is a minor aspect, but it can have an interesting effect on a person's life. It occurs when two planets are about 30 degrees apart, which means they are one sign apart. This aspect involves the sun and Mercury or the sun and Venus, as these bodies are always close to each other in the heavens, but it can happen with any two bodies. Some astrologers say this is a mildly beneficial aspect because it is half of a sextile, but others say it's an irritating aspect, because the two signs belong to different elements. The truth is that adjacent signs do seem to have something in common with each other, so when planets are in adjoining signs, they seem to work in a harmonious manner.

Minor Aspects

There are many other minor aspects, but they don't resemble sacred geometry shapes. Astrologers view them as interesting but of no real use in practical terms when working on birth charts for their clients.

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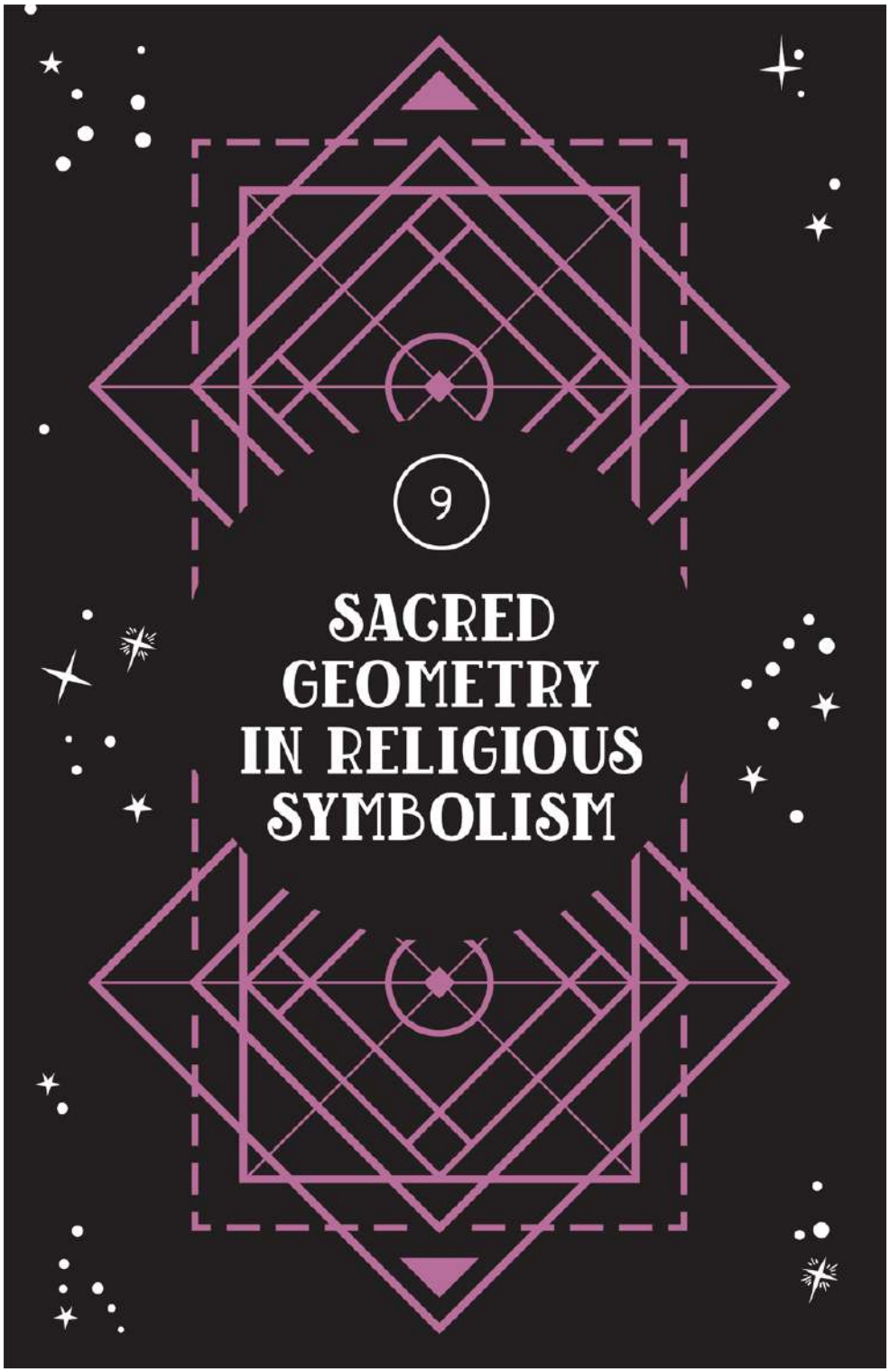
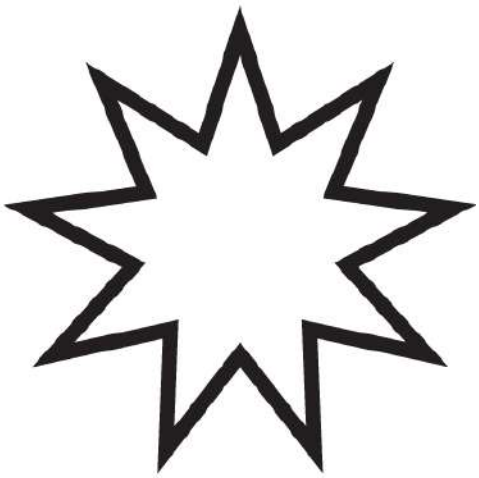

9
SACRED GEOMETRY IN RELIGIOUS SYMBOLISM

There are many different religions, and many different denominations within these religions. In this chapter we will look at the main symbols and symbolism found in several faiths. There may be some overlap between religions, and some of the denominations may have symbols that are attributed only to them.

The Baha'i Faith

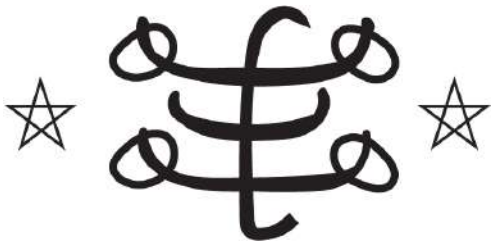
The Baha Star

The symbol used to represent the Baha'i faith is the nine-pointed star. This is because the word *Baha* equates to "nine" in the Arabic practice of applying letters to numbers. Numbers are very significant in this religion, and the number nine represents completeness, as it is the last single-digit number. Baha'i temples have nine sides, which signify that everyone is welcome, regardless of where and what religion they come from.



The Baha'i Ring Stone

Another symbol, the Baha'i ring stone, uses calligraphy to illustrate the phrase *Allah'u'abha*, which means "God is most glorious." The top bar of this icon corresponds to the spiritual realm of God and the bottom bar reflects life on earth. The bar in the center symbolizes the manifestation of God in human form, for example, teachers such as Baha'u'llah, who was the founder of the Baha'i faith, and also Christ and Buddha. The vertical line equates to the Holy Spirit that is present in everything. The two pentagrams are representative of Bab (the herald of the Baha'i religion) and Baha'u'llah.



The Number Seven

The importance of the number seven in the Baha'i faith is seen in the book *The Seven Valleys*, which provides spiritual guidance for followers of Baha'i. Seven is considered a sacred number in many religious practices.

Christianity

The Cross

The symbol of the Christian faith is the crucifix, which originates from the crucifixion of Jesus on a cross. Both the Latin _ cross (crucifix) and the equilateral (Greek) cross have been used in Christianity. Latin crosses, in representing Christ, symbolize faith and forgiveness. Equilateral crosses, also called equal armed crosses, symbolize balance and peace. A Latin cross can be formed by unfolding a cube, and the cube symbolizes stability and foundation. A papal cross has three horizontal lines across one vertical line, and this depicts the pope's authorities, connecting heaven, earth, and the church. Many church foundations are based on the shape of a Latin cross, although a church in Lalibela, Ethiopia, has been carved out of the hillside in the shape of a Greek cross. The flat roof displays three crosses, which is the number of the Holy Trinity.

The Ichthys

Christians also use the ichthys to show their faith. This shape is formed from a horizontal mandorla with the lines extended at one end, and it slightly resembles a fish. This is seen as symbolic, because Jesus was regarded as the "fisher of men."

Geometric Symbols

Many church and cathedral windows have extensive sacred geometry in their designs, so it is common to see trefoil, quatrefoil, cinquefoil, triquetra, and pentagrams. The cinquefoil is said to symbolize the womb of Mary, whereas the quatrefoil is representative of the four Gospels and dodecagrams attributed to the Twelve Apostles. Archways and arched windows sometimes use the top part of a mandorla, and mandorlas are often used in Christian artwork to

surround saints. Other arches are half circles; the whole circle represents God. The baptismal font is sometimes an octagonal shape because the number eight represents infinity, prosperity, and growth.

Numbers

Sometimes arrangements of numbers are used for symbolism, such as windows in groups of three to represent Father, Son, and Holy Spirit, or two hexagrams or three quatrefoils to represent the Twelve Apostles.

Shapes

Churches themselves have various shapes depending on the traditions of the countries in which they are situated. Consider the "onion" shaped domes of Russian churches, for example.

Traditional churches may be based on a Roman model, a Norman model, a Saxon model, a medieval model, or some development of those ideas, and the shape is traditionally that of a cross, facing toward Jerusalem. Many were built at a time when most buildings that people lived and worked in were one or two stories high, so the towering shapes of the churches and cathedrals made a big impression on the populace, while the church towers and spires reached up toward heaven. Cathedrals had three levels of arches, with the top row being called a clerestory. The lower arches allowed rooms off the side passages for small private chapels to be built by those who could afford to do so. Modern churches can be almost any shape and face in any direction.

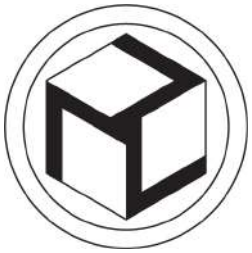
Hinduism

Om

The om symbol, although not geometric, is very sacred in the Hindu religion. It is said that om is the sound made when the universe was created.

Antahkarana

The antahkarana is a symbol that can be created by taking a cube and highlighting three edges from one corner, then an edge from the end of each line in a 90° left angle (looks like three 7s). The word *antahkarana* can be broken down into *antah* meaning inside, and *karana* meaning function, and this is used to represent the higher mind. A small cube is considered male, while a larger one is female. Using seven antahkaranas in a line, with two lines to form a cross, allows a person to work with the energy of the heart chakra. It is said that using sixteen antahkaranas in a square formation assists with removing blockages and negativity.



Swastika

The Hindu swastika, or swastik, is based on the shape of a cube, with a line to each of the four sides from the center, which then is drawn to the corner that is to the right of that halfway point. There may also be four dots, one in each quadrant. The four arms represent the four compass points.

The word *swastika* stems from the Sanskrit word *svastika*, which means "well-being" or "good luck/fortune," and it is associated with the god Vishnu.

It also represents good luck and prosperity in Buddhism and Jainism. Different forms of the swastika have been used for thousands of years in different cultures, but during the Second World War it acquired a malignant meaning when the Nazis adopted the sigil. They believed the swastika denoted racial purity and superiority, and reoriented the symbol to stand on its corner. Unfortunately, due to the actions of the Nazis during the war, there is now a stigma attached to any form of the swastika, as many people are not aware of the difference in appearance.

Star of Lakshmi

The Star of Lakshmi is an octagram made up of two squares. This star represents Ashtalakshmi, which are the eight forms of the goddess Lakshmi, who is the deity of wealth, knowledge, and fertility.

Every year, during Diwali (the Hindu festival of lights), colorful geometric patterns known as Rangoli are created from colored dry rice or flour. These patterns are often in the form of a mandala around a central point. The purpose behind the Rangoli is to welcome the Hindu deities and invite good luck.

Shatkona

The Shatkona is a hexagram consisting of two components: the upward-pointing triangle that represents Shiva, the Supreme God; and the downward-pointing triangle that is connected with Shakti, Mother Goddess. The combination of these triangles symbolizes creation that results from union. The Shatkona is present in many yantras (see below).

Yantra

The yantra is an image used in meditation to aid concentration and raise consciousness, and it is also believed to attract good luck. The word *yantra* means “support” and “instrument,” and each image is comprised of geometric shapes, such as circles and triangles, placed within a square that has a “doorway” in the center of each side. Each shape has a symbolic meaning:

- Square: represents the earth element
- Circle: emblematic of creation and perfection

- Triangle pointing downward: represents water
- Triangle pointing upward: represents fire or spiritual aspiration
- Bindu (central dot): embodies creation and consciousness
- Lotus (petals): shows enlightenment, spiritual awakening, and purity
- Shatkona/Satkona (hexagram): represents the combination of the feminine energy of Shakti, the Mother Goddess of Creation (downward-pointing triangle); and the male energy of the Supreme God Shiva (upward-pointing triangle)
- Swastika: corresponds to good luck and well-being
- Diagonal line: connected with air
- Horizontal line: depicts water
- Vertical line: symbolizes fire

One of the most sacred yantras is the "Sri Yantra." This image consists of nine interlocking triangles: five pointing downward and four pointing upward. This creates forty-three triangles in total. The Sri Yantra represents Mount Meru, the sacred mountain that is the center of the universe.

Other types of yantras are aimed at specific purposes, such as astrological yantras that work with the energy of the nine planets. Shakta yantras connect with the Mother Goddess and work with supreme knowledge while numerical yantras contain numbers that are symbolic—to name but a few.

A Yantra Meditation

- Look at the image of the yantra.
- Stare at the center spot of the yantra, clearing your mind of any thoughts.
- If you find your mind or eyes wandering, don't worry; just relax and start again.

Islam

Crescent and Star

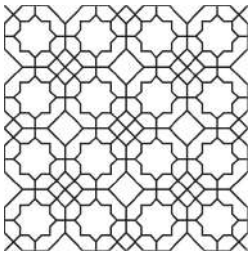
Although the crescent and star symbol is seen as a representation of the Muslim faith, symbolism with icons is not considered part of this religion.

The Kaaba

In Mecca, Saudi Arabia, the most sacred site for Muslims is the Kaaba (or Ka'bah), which is inside the enclosure of Masjid Al-Haram. The Kaaba is a large black cube. Cubes symbolize stability and strength, and six (being the number of sides) symbolizes perfection and harmony.

Patterns

The inside of Islamic religious buildings does not contain pictures or statues but is decorated instead with words and repeating patterns from the Qur'an. The symbolism of numbers is important in Islam, and the basic geometry of these patterns is regular polygons, usually with an even number of sides, as this offers the most symmetry. Stars are often a part of the design, and they can have any number of points, but hexagrams and octagrams (two triangles and two squares, respectively) are both referred to as the Seal of Solomon.



The Breath of the Compassionate

A very common pattern is called The Breath of the Compassionate and consists of octagrams and crosses. There is number symbolism in this design, with fours (arms of the cross) equating to stability and the foundation of all that is, and

eights (sides of the octagram) representing infinity and endless growth. As this is a fractal (never-ending) arrangement, containing the infinite number of eight, this sequence represents God in His infinity; therefore, it was named "Compassionate" after one of the ninety-nine names of God.

The Rub el Hizb

The symbol known as Rub el Hizb is a type of octagram created with two squares, and a dot in the center. The Rub el Hizb is seen in the Qur'an, marking the end of a chapter. This icon can also be found on flags, and in wall and floor decoration.

Jainism

Jain Prateek China

The icon for Jainism resembles a hexagon on the top half of a triangle. This image was created to symbolize the main components of this religion:

- The outline portrays the universe, with the lower part representing the seven hells, the middle part consisting of the earth and planets, and the upper part corresponding to the heavens.
- The raised hand means "stop." Combined with the word *Ahimsa*, which means "nonviolence," this image is a reminder to pause and evaluate before taking action. The wheel shows that if this advice is ignored, then the violence will carry on and on, just like a wheel turning.
- The four arms of the swastika represent the four destinies for rebirth: heavenly beings, human beings, animal beings, and hellish beings.
- The three dots above the swastika equate to the three jewels of Jainism: right faith, right knowledge, and right conduct.
- The curved arc is emblematic of the abode of the siddhas (liberated and enlightened souls), which is called Siddhashila, with a dot representing a siddha.

Judaism

The Star of David

The symbol of the Jewish faith is a hexagram, known as the Star of David. The number six is important in Judaism, because it is the number of days in which God created the world. The outward-pointing triangles on the Star of David symbolize the days of the week, and the center hexagon represents the seventh day—the day of rest. The hexagram, with pointed or rounded arms, is usually prominently displayed, either as a stained-glass window or as a wall decoration.

Symbols in the form of icons are not a large part of this religion, but numbers are considered very symbolic.

Tip

The Star of David, sometimes called the Shield of David, was painted on shields used by the army of King David in biblical times. It is far less of a spiritual symbol than a military or political one.

Hanukkah Lights

The number eight is considered important as the eighth day was the first day after creation; therefore, it is considered as the number of new beginnings. During Hanukkah, an eight-day celebration, one candle on a curving candelabra, known as a hanukkiah, is lit each evening. The ninth central candle is used to light the others.

A seven-branched candelabra, which is the same curved shape, is called a menorah and is considered to be a symbol of the Jewish faith. In this religion, sevens are regarded as the number of luck and good fortune, as well as rest and holiness. Other examples of sevens in Judaism include the seventh day of the week, which is Shabbat, or the Sabbath, a day for resting. There are seven Hebrew words in the first verse of the Torah. Every seventh year is a Shemitah year (a Sabbath year), and after seven Shemitahs there is a Yovel (jubilee) year.

The Pentateuch, or Number Five

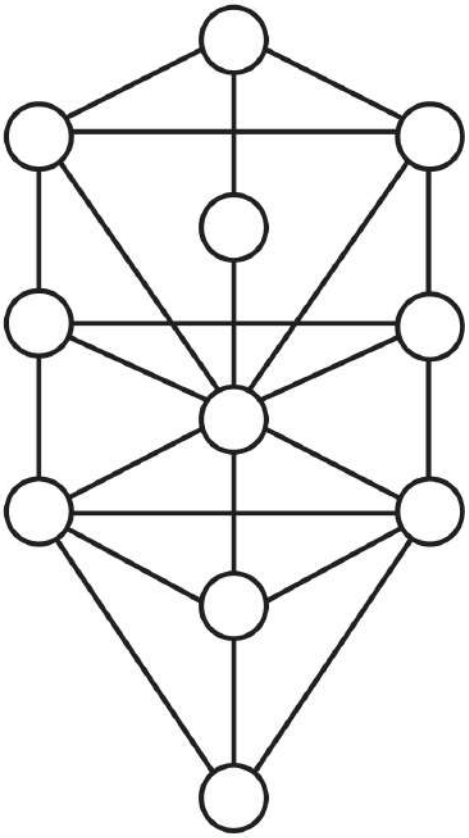
The first five books of the Old Testament become the five scrolls called the Torah, and these are kept in an alcove called the Torah Ark. This is also known as the Pentateuch. The Psalms have five divisions. The Hamsa hand, an icon of protection, has five digits. Fives in Judaism are representative of service, grace, and anointment, and the oil that Jews anoint themselves with has five ingredients. In modern Hebrew, five is now pronounced as “hamesh.”

Number Ten

The number ten is considered sacred and the symbol of completeness and perfection. There are the Ten Commandments, ten plagues of Egypt, ten lost tribes of Israel, and ten adults in a minyan. A minyan is a quorum, or a minimum number of people required for certain religious services.

Kabbalah

The Kabbalah, also known as the tree of life, is a diagram that represents the journey to God. There are ten circles on the Kabbalah, known as sefirot or sephiroth (meaning “spheres”), and these provide guidance on self-development and the path to God. There are twenty-two lines that join the sefirot, each of which contains one of the twenty-two letters of the Hebrew alphabet. Within the Kabbalah are three pillars: the left is named judgment or severity, the center is mildness or kindness, and the pillar on the right is named mercy. Threes in Judaism mainly symbolize harmony and balance, but threes can also be attributed to strength, unity of opposites, and fruitfulness. Interestingly, the growth of trees was said to have occurred on day three of creation. The shape of the Kabbalah can be found within the flower of life.



Paganism and Wicca

Pentagram

A pentagram is used to represent the five elements of fire, earth, air, water, and ether/spirit. However, when represented individually, air is an upward-pointing triangle, fire is an upward-pointing triangle with a line halfway down from left to right, water is a downward-pointing triangle, and earth is a downward-pointing triangle with a line halfway down from left to right. It can also be a plain circle, or a circle with a spiral or a simple line star, which is a simplified version of the seed of life. A double pentagram is used to represent the Mother Goddess and five phases of a woman's life: birth, adolescence, motherhood, menopause, and death.

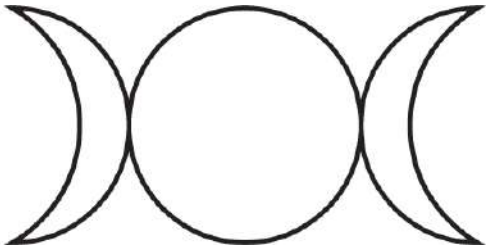
Pagans honor a variety of gods and goddesses, including a Mother Goddess, as you will see here.

Wheel of the Year

A circle with eight spokes depicts the eight seasonal celebrations that happen throughout the year, which are Imbolc, Eostre, Beltane, Litha, Lammas, Mabon, Samhain, and Yule.

Lunar Symbol

The Triple Goddess is shown as a circle with a crescent on both sides facing outward, and it illustrates the three stages of female life, which are maiden, mother, and crone. The maiden is seen as waxing, just as the early stage of life is birth to adulthood. Next is the mother, who does not necessarily represent a parent, just the full bloom of adulthood. After which begins the waning of years as women become older and wiser. The moon is associated with woman, because Wiccans consider it to be a feminine symbol.

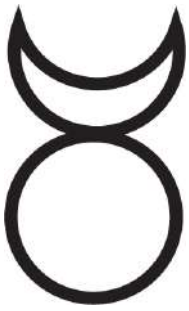


Labyrinth

A labyrinth is different from a maze. In a maze there is a chance of losing one's way and arriving at a dead end, whereas a labyrinth is a curving path that portrays the twists and turns of life, from beginning to end. The labyrinth can be seen as a symbol of spiritual development and our progression through life.

Horned God

The Horned God is known by many names, including Cernunnos, Herne the Hunter, and the Green Man. His symbol is a circle with a crescent above. As already mentioned, circles represent gods, and the crescent in this case corresponds to the horns of the god.



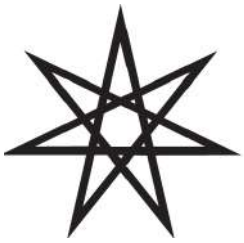
Hecate's Wheel

Hecate is a goddess of crossroads and witchcraft. Her symbol is the Strophalos, otherwise known as Hecate's wheel, which represents the triple form of the goddess. In the center is a whirling six-pointed star, often surrounded by a

circle. The word *strophalos* means “spinning wheel,” and the central star is said to represent the whirling of divine thought. Around this circle is a circle labyrinth representing a serpent. Serpents were often used to represent cycles and rebirth. A third circle encapsulates the whole.

Elven Star

An Elven Star, or Fairy Star, is a heptagram used to represent the sun, forest, sea, magic, moon, wind, and spirit. It also corresponds to the days of the week, the seven chakras, and the star system called the Pleiades, which is also known as the Seven Sisters.

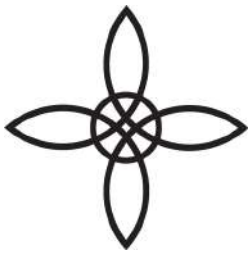


The Spiral Goddess

The Spiral Goddess is an Archimedean spiral on the abdomen of a woman’s outline. She embodies the creative energy that is within us, along with emotions and our self-development.

The Witch’s Knot

The Witch's Knot is formed from a pointed quatrefoil with the inclusion of a circle. There are many different theories on its purpose, but generally it is seen to be a symbol of protection. The four points of the quatrefoil symbolize the points of the compass, and the circle indicates a barrier of protection that has no beginning or end and is therefore impenetrable.



Sikhism

Khanda

The Sikh religious symbol is known as the Khanda, which includes a circle, representative of a steel ring called a Chakkar (or Chiklar) that symbolizes God, as it has no beginning or end. The central double-edged sword is the Khanda, which symbolizes cutting away that which is false. The two curved swords are known as Kirpans and symbolize spiritual and political obligations.

Ik Onkar

Ik Onkar (or Ek Onkar) is the only other symbol used in Sikhism. Ik Onkar is made up of three sounds: *Ik* means "one," *Oang* means "the origin," and *Kaar* is "to take care of." They are the first words of Siri Guru Granth Sahib, the holy book of Sikhism, and refers to everything starting from the one God and being cared for by God. The word *oang* was the sound heard with the creation of the Universe (similar to om in Hinduism). When a Sikh is baptized, this is known as Amrit. Ik Onkar is part of a mantra, known as Mul Mantra, or Mool Mantar, that the Sikh will meditate on. Ik Onkar represents the spiritual aspect of Sikhism, while the Khanda (also known as Kirpana Khanda) represents the warrior aspect, reflected in the weapons illustrated in the symbol.

Doors

There are no religious statues or pictures in a Sikh house of worship, which is known as a *gurdwara*, meaning "Guru's door." Instead, there is a richly decorated plinth that holds the Siri Guru Granth Sahib. The Golden Temple, Sri Harmindar Sahib, has four doors: the Door of Peace, the Door of Livelihood, the Door of Learning, and the Door of Grace. These doors symbolize the four cardinal points of the compass and the fact that everyone is welcome.

Number Ten

Although not all numbers are necessarily important in Sikhism, ten is significant, as there were ten gurus who received instruction from God.

Kakaar

In the Kalsa community of Sikhism, there are five Kakaars, known as "Five Ks," which are items that show that initiation has been undertaken. Kesh is hair that has not been cut, which is secured with a turban; Kara is a steel bracelet that reminds the wearer to act with restraint and integrity; Kanga (or Kangha) is a wooden comb symbolizing cleanliness; Kachha (or Kachh/Kachhera) is underwear as a reminder to have self-control and chastity; and the Kirpan, a dagger, symbolizes the readiness to fight against injustice.

Number Five

Fives are also found in the five virtues and five evils of Sikhism. The Five Beloved Ones (Pyarey) were prepared to die for their faith; the five Banis are prayers that are recited daily; the five Takhts are gurdwaras with special significance; the Siri Guru Granth Sahib was created by the fifth guru and includes teachings of all the previous gurus and prominent saints, including the Hindu and Muslim religions. The teachings of the Siri Guru Granth Sahib were finalized by the tenth guru.

Patterns

The flower of life and other geometrical patterns can be found covering the walls, floors, and ceilings of the Golden Temple, a Sikh gurdwara in Amritsar, India.

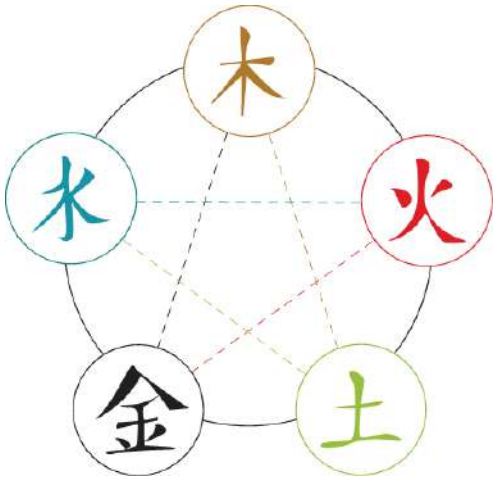
Taoism

Yin-Yang Symbol

One of the most recognizable symbols in Taoism is the yin-yang circle, called the Taijitu. This represents the Tao view on duality. Take male/ female, for example: male is yang (white) and female is yin (black); the symbol shows that within either of the aspects is an element of the opposite energy. The Taijitu can be formed by drawing a large circle with two smaller circles of the same size inside, one on top of the other. In the middle of each small circle, a tiny circle is drawn. Then, a line is drawn on the right side of the top circle and the left side of the bottom circle making the lines meet in the center; one side is then colored black and the other white, with the tiny circles being the opposite shade, to show there is always a little yin in the yang side of life and vice versa.

Elements

There are five Chinese elements: wood, fire, earth, metal, and water. They are collectively known as *Wu Xing* and are often placed in this order at five points around a circle or pentagon, with each element generating, or enhancing, the next element in a clockwise direction. Each element works best with the element that is two steps away in a clockwise direction. Drawing a line between the controlling elements gives us a pentagram.



Trigrams

Trigrams are stacks of three lines where each line can be solid or broken. There are eight combinations of trigrams, and each one represents a number of concepts. The trigrams are present in the Ba Gua.

Trigram	Name	Meaning
☰	The Creative	Heaven
☱	The Joyous	Lake
☲	The Clinging	Fire
☳	The Arousing	Thunder
☴	The Gentle	Wind
☵	The Abysmal	Water
☶	Keeping Still	Mountain
☷	The Receptive	Earth

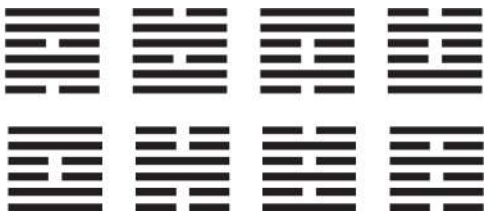
The Ba Gua

The Ba Gua (or Bagua/Pah Kwa/Pah Kua) is an octagon containing eight trigrams. The Ba Gua as a whole represents heavenly and earthly influences, and each trigram is connected with a different cardinal direction, element, and area of life. It is utilized in feng shui to calculate the most effective placement of items and furniture in the home, office, or garden.

The *I Ching*

The *I Ching* (pronounced "Eee Ching") book is a Taoist tool for self-development. *I Ching* means "Classic of Changes" or "Book of Changes," and the pages include advice and philosophy in sixty-four chapters that are each connected with a different hexagram. A hexagram is a stack of six lines that can be either solid or broken, like the trigram in the Ba Gua. Special sticks can be drawn or coins can be thrown to determine the format of the hexagram. For example, tails are yin and that means the questioner draws a broken line, whereas heads, which are yang, would be drawn as an unbroken line. While thinking of a question or issue, you throw the coin six times to arrive at the full hexagram, starting from the bottom line, with each subsequent line being drawn above. The page that corresponds with this hexagram contains an insight into the question.

An *I Ching* coin is a circular coin with a square missing from the center, with a yang (heads) side and a yin (tails) side. These coins are seen as a powerful attractor of wealth. The coin combines the circle, symbolizing heaven, with the square, which represents the earth. The yang (masculine) side has four hieroglyphs, whereas the yin (feminine) side has two.



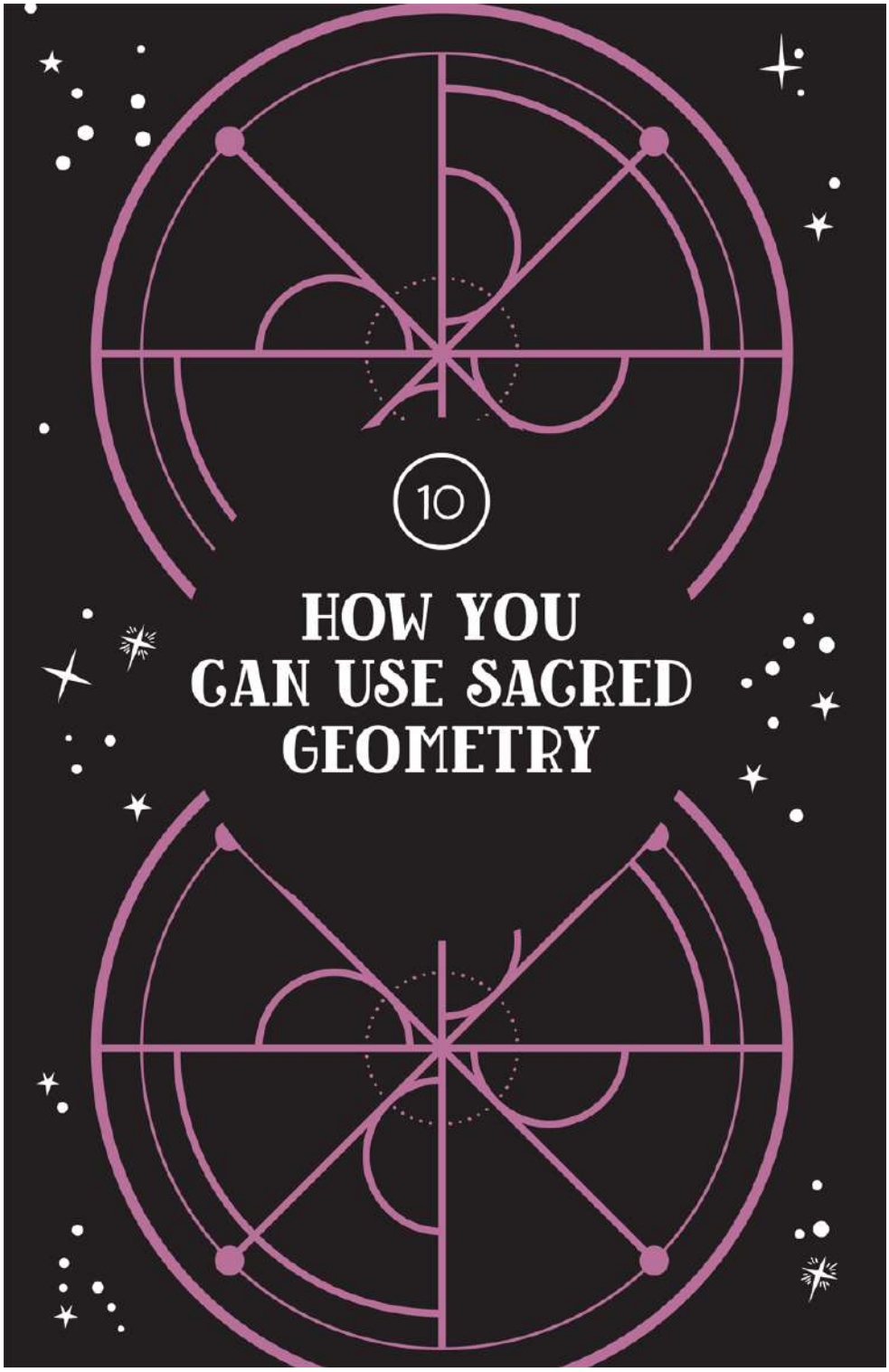
A Hexagram Meditation

The *I Ching* hexagram number 20 is known as "contemplation." This hexagram can be used for meditating on a specific issue or problem. It resembles a tower and shows us that we need to rise above the situation in order to see more clearly.

- Imagine that you are watching the situation play out as you observe from the tower.

- If there are other people involved, examine the possible reasons for each participant's behavior. If you were a mediator for all the people involved, how would you encourage the participants to work through their differences?
- If you are using this meditation to observe your own thoughts and actions, it is important to be nonjudgmental: you are here to observe only.
- When you have finished meditating, write down all of your thoughts. You may think of something else while you are writing, or even at a later time.

This can be quite a difficult meditation as it is sometimes hard to look at our own behavior. It is important that we use our observations in a positive way, to instigate a positive change.


10
HOW YOU
CAN USE SACRED
GEOMETRY

Sacred geometry can be used in many ways on any spiritual path. This chapter has a number of ideas so that you can begin to use its principals on your own journey, and these will hopefully guide you to come up with your own methods, meditations, and practices.

Mandalas

A mandala is a repeating pattern, such as the flower of life. A mandala makes a lovely pattern for a wall decoration or jewelry. The shape of the mandala can be drawn, or simply created from things like crystals, feathers, flowers, and the like. Mandalas can also be used as crystal grids. The crystal grid can be set up with the intention of sending healing energy to yourself or to someone else, with the intention of the healing being for the recipient's highest good.

A Mandala Meditation

- Look at the mandala image as a whole, clear your mind, and calm your breathing.
- Now, starting at the top of the mandala, let your eyes move slowly around the outside of the pattern.
- When you reach the point you started at, move your focus slightly toward the center and follow the circular layout of the mandala.
- Continue this until your focus rests at the center of the mandala.

- After staring at the center for a while, close your eyes, keeping your breathing steady, and visualize the image of the mandala in your mind until you decide to end the meditation.

Art

Anyone who had a Spirograph as a child will remember the relaxing pastime of creating geometric designs. As an adult, I have enjoyed re-creating some of the sacred geometry in this book, using simple tools like a compass and ruler … and if I can do it, anyone can!

There are now "dotting mandala workshops" where you get to create a beautiful piece of geometric artwork. Or, if you are already an artist, why not incorporate sacred geometry into your creations.

Dream Catcher

Dream catchers are Native American talismans that protect a sleeping person from bad dreams. A dream catcher is formed with a circular hoop, in the center of which is a woven net, and strands of beads and feathers are hung from the bottom of the hoop. The good dreams are able to move freely through the holes in the weaving, passing down strands toward the sleeper. The bad dreams get caught up in the weaving and are dissolved by the rising sun the following morning.

The center woven part of a dream catcher has a layout similar to a two-dimensional torus, and the overall meaning of the dream catcher is about allowing the flow of that which is good, and blocking that which is bad.

Dream Catcher Meditations

If you have a dream catcher, hang it up on the window of your bedroom, as this will keep out bad dreams and let in the good ones. Now sit and gaze at

the dream catcher until you fall into a trance-like state. You can tackle each part of the dream catcher as an individual meditation, or you can do them all at the same time just as you like. Here are some meditations you can do that correspond to the points of the compass.

THE NORTH

- Look at the top of the dream catcher and imagine a pale-colored buffalo there.
- Imagine the winter and see how this sturdy animal copes with the demanding climate.
- Imagine yourself doing well in demanding circumstances.

THE EAST

- Look at the right side of the dream catcher and imagine the golden eagle there.
- Consider how great it would be to soar away into the sky, flying high above your troubles.
- Consider optimistic signs of the future, such as the rising sun and the coming of spring.

THE SOUTH

- Look at the bottom of the dream catcher and imagine a coyote.
- This animal is a hunter-totem, giving you the strength to do the things that you find difficult.
- Consider the warmth and abundance that comes with the summer and how good it would feel to have some of this for yourself.

THE WEST

- Look to the left of the dream catcher and see a grizzly bear.
- The bear is very strong but also knows when to give up the fight and hibernate, so it might be time for you to back off and take a rest.
- Think of autumn and the harvest, and dream of having full cupboards and a bank account that can easily cope with your lifestyle.

Meditation

As each shape that is important to sacred geometry has different symbolism, each shape can be meditated on to assist with a situation or to gain a deeper understanding of the shape. This could be done by gazing at a picture of the shape for a few minutes before closing your eyes and keeping your attention focused on what the image looked like, or you may like to obtain a

three-dimensional example of sacred geometry, such as a crystal Platonic solid, to hold while you are meditating.

Yantras are interesting images to aid in settling into a meditation. The idea is to start at the outside of the picture and slowly move your focus in a clockwise spiral, making note of all details as you move slowly inward to the bindu at the center. This helps to calm the mind to allow meditation to begin in a relaxed fashion.

To meditate with a yantra, stare at the central point in the image while clearing your mind of any thoughts. If your mind or eyes start to wander, simply relax and begin again.

Feng Shui

The practice of feng shui involves placement of furniture and decoration to enable the movement of *qi*, or "energy." Shapes of furnishings and objects are considered very important in feng shui, so sharp corners send out a particular type of bad energy, as do sharp plants like cacti. Rounded corners and shapes are considered beneficial.

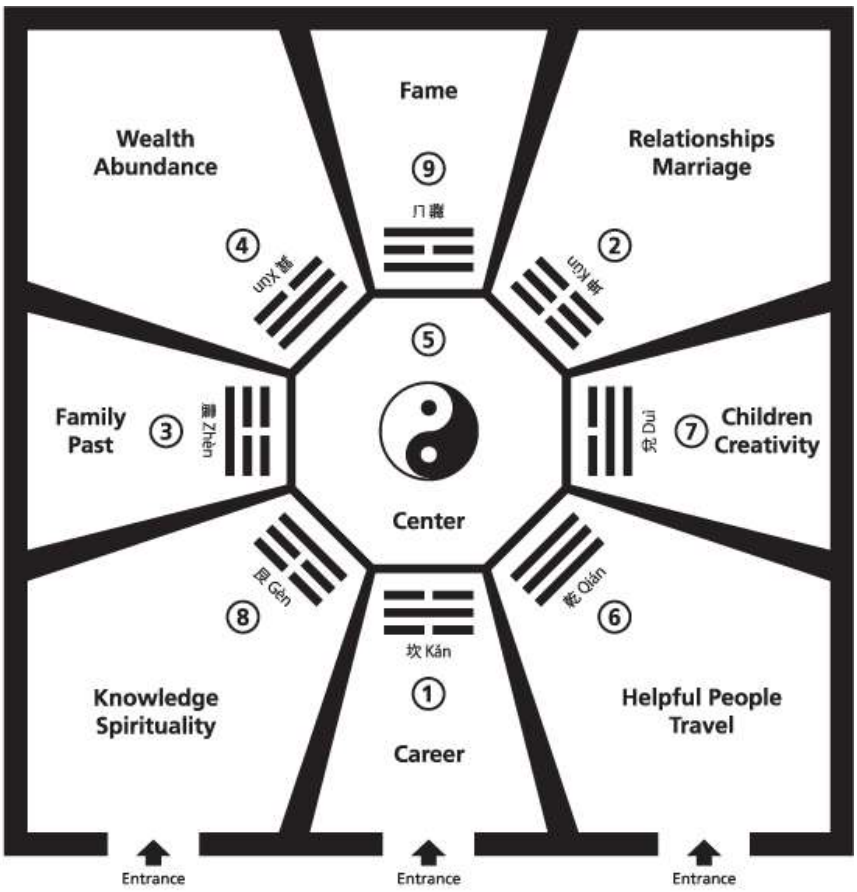
Lighting is important, and mirrors are the most commonly used item to bring light into a home, which is believed to bring in a positive effect. Mirrors are available in many designs, including some of the sacred geometry patterns within this book, so consider brightening one of your rooms by choosing a shape that symbolizes something to you.

Plants are also believed to be an important part of the household. There are lots of geometrically shaped plant holders available now, and this can be a simple way of bringing sacred geometry into the home.

Direction	Element	Color	Number	Area of Life
South	Fire	Red	9	Fame & reputation
Southwest	Earth	Pink	2	Love & marriage
West	Metal	White	7	Creativity & children
Northwest	Metal	Gray	6	Helpful people & travel
North	Water	Black	1	Career
Northeast	Earth	Blue	8	Knowledge
East	Wood	Green	3	Family
Southeast	Wood	Purple	4	Wealth & prosperity
Center	Earth	Yellow	5	Health

The bagua is an energy map that can be placed over a plan of your home in order to assist feng shui placement. In the center of the bagua is usually a yin-yang circle (Taijitu) that is surrounded by the eight trigrams in an octagon shape. Each trigram represents a compass point, and each compass point is connected with elements, a number, a color, and specific areas of life.

There are different schools of feng shui which all work with different methods, but generally your main entrance is considered to be at the north compass point. Taking your house plan, place the bagua so that north is placed at your main entrance. You can now see which areas of your house correspond to each area of life. This enables you to enhance certain areas of your life. For example, if your finances are struggling, you may wish to look at enhancing the wealth area of your home with plants, crystals, a mirror, or even moving some furniture around. The bagua can also be placed over the plan of a single room, following the same principle whereby the main doorway is at north.

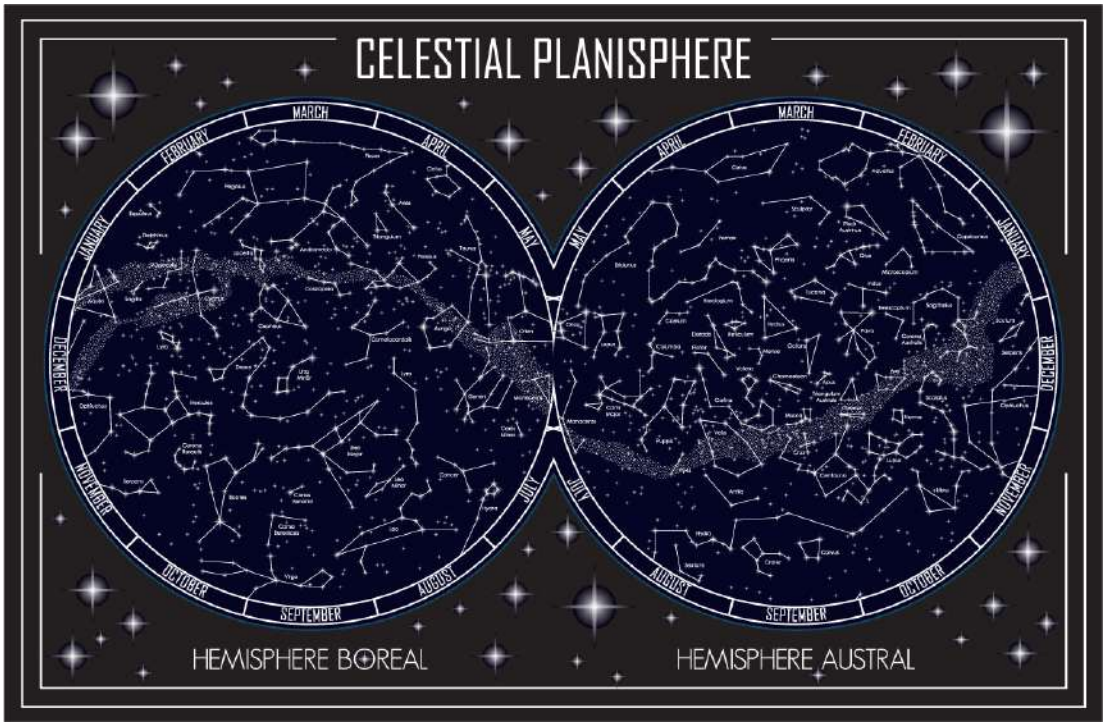


Feng shui can be very in-depth, and there are many books on this subject if you would like to find out more.

Stargazing

Learning to recognize the linear patterns of constellations in the night sky can be a very absorbing hobby. Astronomy is best practiced on a cloudless night away from the glare of any artificial light. A telescope is not necessary, but it can help you to spot individual stars, which are not easily discerned with the naked eye, and really exciting things, like the four largest moons of Jupiter.

You may want to do some research before setting out, as the sky differs depending on the time of year. Also, bear in mind when you are doing your research that the positioning of the stars is different in the Northern Hemisphere compared to the Southern Hemisphere.



Star Meditation

- Sit quietly where you won't be disturbed and close your eyes.
- Visualize a star moving toward you, closer and closer.
- As the star draws close and stops in front of you, you realize the star is about your height.
- The star shines with a brilliant, bright white light, but it does not hurt your eyes to look at it.

- Ask the star to shine its light on your heart.
- Visualize an answering light begin to shine at your heart as you start to vibrate to the same high frequency as the star.
- The bright light inside you grows until your whole body shines and your energy matches that of the star.
- Thank the star and watch as it slowly withdraws the way it came.
- When you feel ready, open your eyes. Your aura may feel bigger and clearer after this meditation.

These are only a few suggestions for how you may like to invite the energy of sacred geometry into your life. As you try out the various meditations and visualizations in this book, you may receive insight or even a message into how to further work with the shapes, including creating your own meditations and spiritual exercises. Your spiritual path should include what feels right for you, and sacred geometry can be a useful and symbolic addition to your journey.

❋ ❋ ❋

CONCLUSION

There is no doubt that sacred geometry is a huge subject and a fascinating one, but it isn't an easy one to study. I hope this book gives you all you need for a thorough introduction to this subject, and that it may also encourage you to take a special interest in some aspect of sacred geometry so you take your studies further.

ABOUT THE AUTHOR

Bernice grew up on a farm in rural Devon, UK. Even though she now lives in a city, she spends a lot of time in the countryside, visiting Dartmoor and walking around local woods. There are also many beaches in the area that she likes to visit.

She worked for many years as a secretary, before giving up work to raise her son. Just a few years later, her life started moving in a different direction when she discovered crystal healing, self-development, and sacred geometry. Nowadays, Bernice likes to keep herself busy. As well as being a crystal therapist and having two part-time jobs, she enjoys volunteering at the Devon Family History Society, researching her family tree, and helping other people research their own ancestors. Her hobbies include learning to play the harp, walking, cycling, learning British Sign Language, collecting crystals—a hobby she shares with her teenage son—and, of course, studying sacred geometry.

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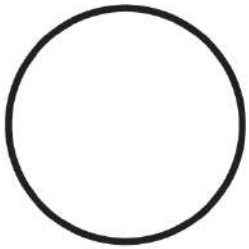
This book provides general information on various widely known and widely accepted images that tend to evoke feelings of strength and confidence. However, it should not be relied upon as recommending or promoting any specific diagnosis or method of treatment for a particular condition, and it is not intended as a substitute for medical advice or for direct diagnosis and treatment of a medical condition by a qualified physician. Readers who have questions about a particular condition, possible treatments for that condition, or possible reactions from the condition or its treatment should consult a physician or other qualified healthcare professional.

THE SHAPES OF SACRED GEOMETRY

People have studied geometry for thousands of years, and as early mathematicians marveled at the patterns and beauty in their calculations, they decided such perfection had to come from the Creator. This is how geometry came to be sacred. Meaning has been ascribed to many different shapes, and sacred geometry appears in letters, numbers, art, architecture, and religious symbols. After all, sacred geometry appeals to us on many levels, as the shapes formed are often symmetrical and balanced; we are always subconsciously seeking balance in mind, body, and spirit, and so people use these shapes just about everywhere in the world.

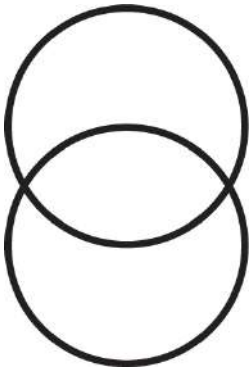
The Circle

The first shape of sacred geometry is the circle. This is the shape attributed to the Creator, embodying perfection and wholeness.



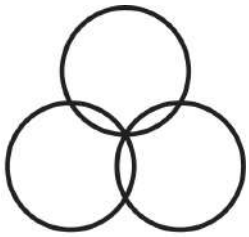
Vesica Pisces

Vesica Pisces connects with partnerships and pairs, but on the other hand there are enemies and differing points of view.



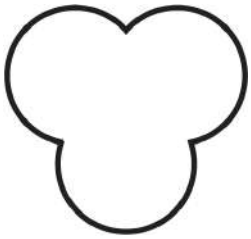
Tripod of Life

The circles are a metaphor for group energy, depicting situations that require cooperation, similar to the Olympic rings that symbolize the union of five continents.



Trefoil

The trefoil is often seen in window architecture, especially in churches where it represents the Christian Holy Trinity of the Father, Son, and Holy Spirit.

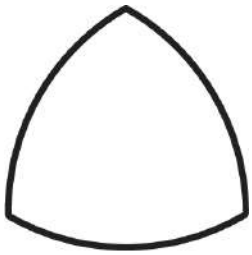


Triskelion

In Celtic symbolism a triskelion is used to represent spiritual development.

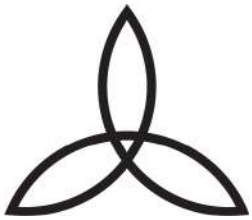
Reuleaux Triangle

This shape is often seen in church windows, either as a sole Reuleaux triangle or with other geometry inside, such as a triquetra. As with other triangles and threesided shapes, the Reuleaux triangle represents the Holy Trinity.



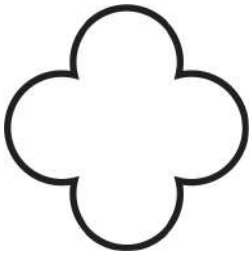
Triquetra

This is used to represent the joining of heaven and earth, and it symbolizes the Holy Trinity. In pagan terms, it is known as the Triple Goddess: maiden, mother, and crone.



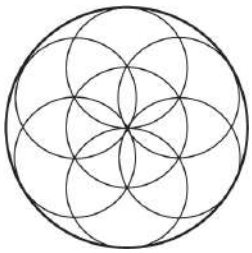
Quatrefoil

In Christianity, the number four corresponds to the four gospels, so the quatrefoil is often used as decoration in stained-glass windows.



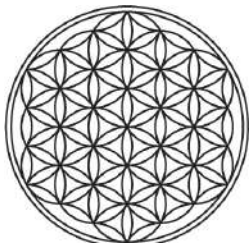
Seed of Life

Sometimes referred to as the Genesis pattern, this shape can be used to represent the seven days of creation, with each outer circle representing one day and the inner circle completing the cycle. Slavic mythology has a similar icon that connects to the god of thunder. The number six is also attributed to moving on and learning from experience.



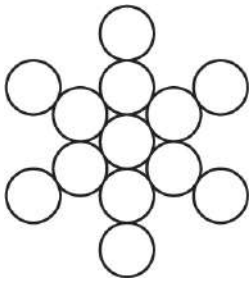
Flower of Life

The flower of life consists of nineteen overlapping circles with a circle (sometimes a double-lined circle) around the perimeter. This shape represents manifestation and creation. The flower of life is regarded as an image of balance and harmony, and it has been adopted as decoration in many religious buildings.



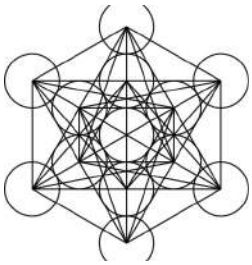
Fruit of Life

In nature, life begins with the seed, then comes the flower, and finally you have the fruit, which is the promise of new life to come. Fruit represents fertility, abundance, and good health.



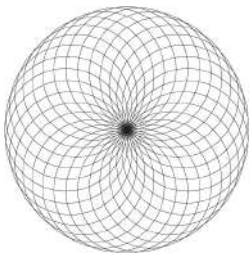
Metatron's Cube

There are thirteen circles and seventy-eight lines in this shape. As circles are seen as feminine and lines as masculine, Metatron's cube is a representation of balance of both these energies.



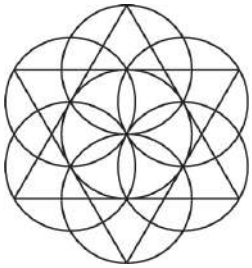
Torus

A two-dimensional torus contains an optical illusion because staring at the whole image gives the impression of concentric white circles, but attempting to stare directly at the intersections where a white dot should be causes the white dot to disappear.



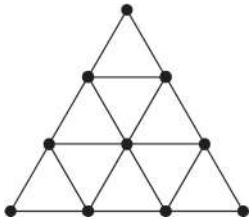
Triangle

Triangles are used to represent occurrences of threes, including anything that has a beginning, middle, and end, such as the past, present, and future; birth, life, and death; flower, fruit, and seed; and so on.



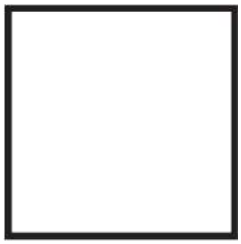
Tetractys

The tetractys, meaning “the holy four-foldness,” is a triangle of ten dots.



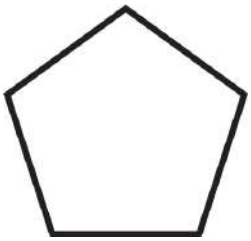
Square

A square is often used to symbolize patterns in nature, such as the four seasons, the cardinal directions, and the four elements of the zodiac. Squares are also used to symbolize the earth element, stability, and the material world as opposed to the spiritual world.



Pentagon

In certain belief systems, there are five elements to life: earth, air, fire, water, and spirit or ether as the fifth element. In the Chinese system, the five elements are wood, fire, earth, metal, and water. For this reason, five can represent manifestation and creation.

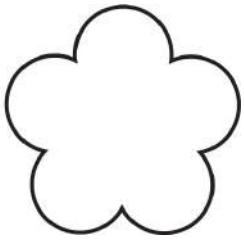


Pentagram/Pentacle

Pentagrams are often used to represent the stars in the night sky, but this shape is a common symbol with many applications. For instance, it is used to represent paganism and Wicca, and it is also used on tarot cards to represent security and wealth.

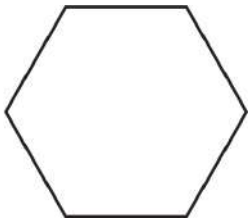
Cinquefoil

This shape is frequently seen in church window decorations, sometimes with just the top three circles. The ancient Romans called the cinquefoil "The Rose of Venus," and it was said to symbolize womanhood.



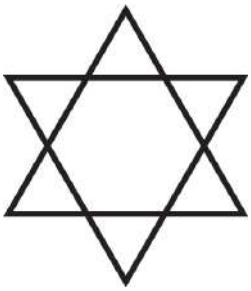
Hexagon

Six is associated with time because minutes and hours are multiples of six. Six is also regarded as the number of union and marriage, and hexagons thus represent harmony and balance.



Hexagram

The hexagram is sometimes known as the Star of David or the Seal of Solomon. This is the name for two interlaced triangles, one with the point facing upward and the other pointing downward. The upward-pointing triangle represents male energy, while the downward-pointing triangle is female energy.



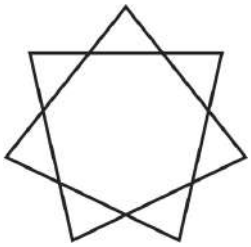
Heptagon

Seven is seen as a sacred number in many religions and spiritual beliefs. The number seven symbolizes the combination of the number three,

representing heaven, spirit, or soul, and the number four, symbolizing earth or body.

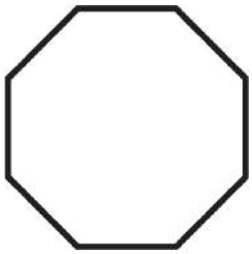
Heptagram

The heptagram is used as a symbol for many different subjects and ideas, often involving religious beliefs.



Octagon

The octagon can symbolize eternity. Eights are also seen as a prosperous number, and an octagon is used in the Taoist system of feng shui, which is the practice of arranging furniture in a building to create optimum energetic stability.

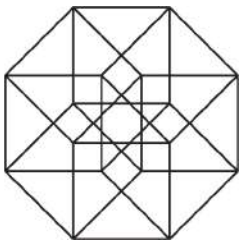


Octagram

An eight-pointed star symbolizes infinity as well as certain religious ideas. Octagrams are also seen on the face of a compass, denoting not just the cardinal points of north, south, east, and west, but also the intercardinal points of northeast, southeast, and so on.

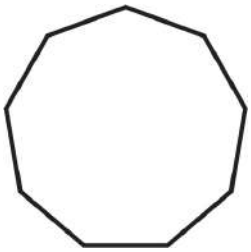
Hypercube

A hypercube is created with eight squares that have a corner touching both the next square and the previous. The hypercube is said to symbolize four dimensions: length, width, height, and time.



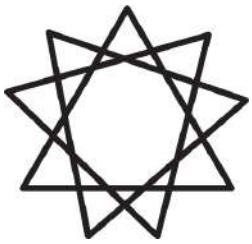
Nonagon

The Pythagoreans associated this number with failure, due to the fact that nine is just short of the perfect ten. In some beliefs, nine is seen as the number of completion, with a new beginning starting with the number ten. This is echoed in the nine-month gestation period in humans. The nonagon is sometimes used to represent self-reflection and learning from life before moving on.



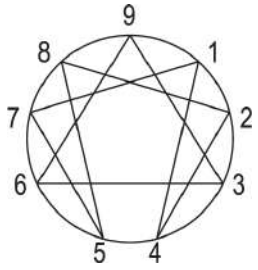
Nonagram

A star consisting of nine points is known as a nonagram. A nine-pointed star with a nonagon in the center is knowns as the Ninefold Goddess in the pagan and Wiccan faiths. Each point represents an aspect of the goddess.



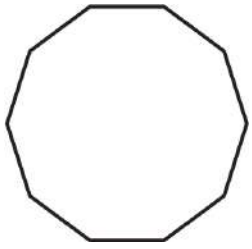
Enneagram

An enneagram is a ninepointed shape that has an open base and is surrounded by a circle. The enneagram is most commonly used in the Enneagram of Personality system, which attributes a type of personality to each point. The lines traveling from one point to the next show the connection and relationship between different aspects of personality.



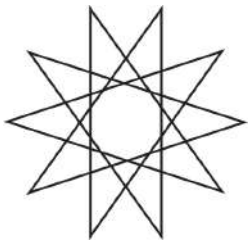
Decagon

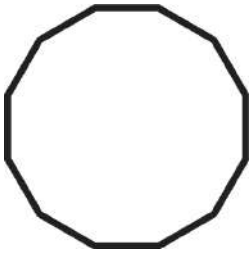
Ten was considered the perfect number by the Pythagoreans, because if both digits are added together, the result is one, which was believed to be the number of the Creator. The number ten is also seen as the completion of a cycle and can represent determination and hard work paying off.



Decagram

This ten-pointed star can be created with either a double pentagram with one point up, or one point down, or by drawing a continuous line starting from one inside angle and going to the third angle along each time until reaching the starting point.



Dodecagon

This shape is used to represent the universe. Twelve is considered to be the number of perfection and cosmic order. Days are measured in two twelve-hour periods, with twelve numbers on a clock, and there are twelve months in a year and thus there are twelve signs of the zodiac.